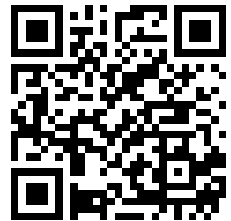

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

History Repeats Itself in Pharmacy

By N. T. Chamberlin

Assistant Professor in Pharmacy

The earliest medical, pharmaceutical and religious practices were so overlapping in their functions that it is generally accepted that all must be looked upon as having originated in fetish practices like those still in use by many tribes of savage peoples. Disease was regarded as a manifestation of evil influences and the business of the early practitioners was to eliminate the influences. If the performance was confined to the body of the patient, then the physician was functioning. If the act had to do with the preparation of materials, then the pharmacist was functioning. Again, if the field of influence involved the numerous gods of the unseen world, then the chanting of litanies, weird incantations or some other form of religious supplication, was brought into action.

Because of the involved nature of these ancient practices it will be observed that the role of pharmacist in preparing materials was of great importance. The "soul" of the material was regarded as a very elusive thing and it was this beneficent soul or spirit residing in the various medicinal substances that was needed to combat the "evil spirit" of disease. Hence the importance of gathering herbs or obtaining animal substances under those conditions that might insure mystic quality. The structural form of some particular part of the plant, resembling, perhaps, some deity; the physical attribute of some animal, inherent in one of its parts, like the heart of the lion; the position of the heavenly bodies; all these must be taken into account in the work of the ancient pharmacist.

As time went by the various civilizations of the ancient world made their contributions, positively or negatively, to the progressive trends of practice. The Egyptians, Greeks, Romans, Arabs and the progenitors of the modern European nations, all helped to keep the pendulum swinging, first in one direction, then in the opposite.

In this brief article only the barest allusion can be made to a few of the many recurring problems—the ever-swinging pendulum of practices and trends. Twenty-three centuries have passed since Hippocrates, the first authenticated writer on medical topics, directed his fellow physicians to pay particular attention to the dreams of the patients and himself. These dreams or visions, instigated by superstition and evidenced by an elaborate mythology, may be considered as a religious force that swayed pharmaceutical practice well into the beginning of the Christian era.

After the gods and goddesses of the ancient world were replaced by the Christian saints in the early middle ages we find many instances on record of miraculous healing and at various periods much evidence to indicate a direct influence by the priesthood on all things associated with the healing art. Later, the monks of certain religious orders were forbidden to draw blood. So in one way or another we often find a recurrence of these influences, due to the trend of religious thought. This sort of thing has continued down to the present time with several religious cults still in existence having a direct influence on medical and pharmaceutical practice. One of these, with a borrowed trade-name, flourishes in a way that compares favorably, as regards the relative number of followers, with the religious orders and cults that had their rise and fall in previous historical periods.

The first great practitioner of medicine and pharmacy whose labors appear to have been comparatively free from mixed medical and religious procedures, as practiced in the Greek Temples and cited by Hippocrates, was Claudius Galen, a second century Greek. Galen's greatness is attested to by the fact that for more than thirteen centuries his views regarding disease and its proper treatment were accepted as infallible

by those whose learning qualified them as leaders in medicine and pharmacy. The fact must not be overlooked, however, that all through these thirteen centuries superstition had supreme ascendancy over all fields of human endeavor and, as a consequence, medicine and pharmacy, in the main, wallowed through the mire of many fetish practices. Galen practiced his profession in Rome and, according to the records, kept a drug store. He used medicines made from plants and plant products in place of the repulsive and disgusting animal substances used in the earlier and later centuries.

The fifteenth and sixteenth centuries ushered in a revival of medicine and pharmacy. Alchemy had reached the height of its practice and had contributed many worthwhile substances and processes to the healing and pharmaceutical arts. Paracelsus, a wandering German scholar, gave a new mission to medicine and pharmacy by introducing mineral substances into *materia medica* and asserting that disturbed bodily functions could be set in order by the use of chemical medicines. He taught that the sole purpose of alchemy was to prepare medicine. By many writers, Paracelsus has been regarded as the originator of modern medicine, or at least the type of modern medical practice that prevailed through most of the nineteenth century. The researches of Boyle, Scheele, Lavoisier and a host of others during the seventeenth and eighteenth centuries completely uprooted the alchemistic doctrine so rampant during the middle ages and placed the practice of modern chemistry on a firm foundation. While it is true that seventeenth and eighteenth century chemistry was involved in false theories, it did, nevertheless, become the true scientific auxiliary of medical and pharmaceutical practice many years before Lavoisier finally entrenched it in the latter part of the eighteenth century.

Looking backward over these periods of medical and pharmaceutical history we find many broken and missing links in the chain of evolutionary development. While ethical practices were established early in many places, we often find only chaos in succeeding periods. Both medicine and pharmacy have experienced their "ups and downs" from the days of Rome when Galen com-

pared the doctors to robbers and said that between them there existed but one point of difference, namely, that the latter carried on their infamous practices in the hills and the former in the towns. Pliny wrote that doctors often practiced legacy-hunting and compassed the death of people by the administration of poison. Slaves were often trained as doctors and sold for larger sums than eunuchs. Pharmacy was held in highest esteem in the sixteenth century when it was completely separated, in England at least, from medical practice. Before and after this period, however, there are plenty of instances on record to prove its inferior position in the minds of many writers. Shakespeare penned the following in "Romeo and Juliet": "I do remember an apothecary—Sharp misery had worn him to the bones." Many times in history have the pharmacists been accused of driving sharp practices in order to eke out their unprofitable and scanty vocations. To combat this we find Emperor Charles V decreeing that the authorities in matters pertaining to the apothecaries' trade should inspect their places of business and remedy the evils pertaining thereto.

The living generation of pharmacists has many perplexing problems to face and in many ways these problems seem quite insolvable. On every hand we meet difficulties so confusing in their nature that it sometimes seems that the very existence of pharmacy is threatened. The current literature dealing with it frequently displays articles under such title-heads as: Price Maintenance, The Need for Organization and Co-operation, Are There Too Many Retailers? How Long Should a Course of Study in Pharmacy Be? The Drugless Drug Store, Ethical vs. Commercial Pharmacy, What Is the Matter with Pharmacy? and so on ad infinitum.

Problems of a similar order have been recurring since the history of pharmacy began. Price maintenance has frequently been a problem. So long ago as the thirteenth century we find severe legal restrictions imposed in Italy that required drugs to be sold according to a tariff determined by competent authorities. The many apothecaries' guilds established throughout Europe in the fourteenth and fifteenth cen-

turies were the forebears of our present associations and then as now, such advantages as accrued to pharmacy in its competition with other trade forces were obtained through effective organization. At the very beginning of the fourteenth century a pharmaceutical guild in Bruges, through effective organization and subsequent efforts in a legislative way, succeeded in having the exclusive sale of medicines confined to the profession. Of course it was also through methods of the same nature that greater remuneration for services was obtained and the general welfare of the pharmacists thereby augmented.

Prosperity and affluence within any professional or economic activity soon brings increased numbers of those who wish to avail themselves of greater opportunities. There are many instances in history where pharmacy has been overcrowded. Late in the sixteenth century an act was passed in Belgium to limit the number of pharmacists. No one was allowed to practice who had not previously studied for three years and demonstrated his capabilities in both the theoretical and practical phases of professional practice. In Nuremburg it was ordained that "in future no new drug-store shall be established, nor shall a new one take the place of any which may be discontinued." In many German cities, during the seventeenth century, the proprietor of a pharmacy was required to pass a supplementary examination. Because of these restrictions, both academic and legal, the pharmacists of Nuremburg, Strassburg, Vienna and other places claimed and obtained special privileges on the ground that their calling was a profession and not a trade.

Even the problem of the drugless drug store seems to be reflected down to us from the early eighteenth century. The historical archives of Nuremburg reveal that there were frequent memorials respecting the grievances of the pharmacists. They claimed their field was being invaded by grocers, spice dealers, distillers and notion dealers of all kinds. Capitalizing on the established prestige of the pharmacist was as strenuously objected to as it is now.

In England the grocery business was separated from pharmacy in the seventeenth

century by royal decree and the pharmacist was regarded as being engaged in a medical specialty and not in merchandising. This soon brought on a conflict with the physicians who accused the pharmacists of counterprescribing and all sorts of infringements on the rights and prerogatives of the medical profession. So on the one hand we see the pharmacist as the accuser, and, on the other hand, the accused. What he has lost in one period he has gained in another. Due to everchanging economic conditions and the changing trends of professional practice, he had to defend himself against procedures in one period that later he had to adopt for his own welfare.

Let us not be dismayed, then, by the vexations pressing in from all sides upon our chosen profession. If time is taken to review the historical aspect of our calling, we shall only see new phases of old hindrances, portentous in appearance, but, I believe, only normal attributes of an ordinary and established historical process.

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NUTRITIONAL VALUE AND STANDARDIZATION OF COD LIVER OIL AND OF ITS NON-SAPONIFIABLE FAT-SOLUBLE VITAMINE CONCENTRATE (OSCODAL)*

The empirical use of cod liver oil for the treatment of such diseases as rheumatism, gout, osteomalacia, tuberculosis, scrofula and rickets is age old. Today, based upon indisputable experimental evidence demonstrating that the therapeutic value of cod liver oil is due to its fat-soluble antirachitic and antiophthalmic vitamine content, cod liver oil, in one form or another, is employed throughout the world as a specific in the prevention and cure of rickets and as

a valuable aid in the management of other diseases and disturbances in nutrition.

Necessarily, the older theories which attributed the medicinal value of cod liver oil to its iodine or phosphorus content or to its peculiar virtues as a fat have been thrown into the discard.

While numerous references have been made to the unpalatability of even the best grades of cod liver oil, there has been no evidence to show that cod liver oil might be detrimental to health. Recently, however, there has been a report from Sweden that cod liver oil, in doses of 0.1 cc. per day, has exhibited a deleterious effect upon young white mice fed on an ordinary basal diet. Such reports as this if broadcast and left unchallenged, would undoubtedly cause uneasiness in the mind of the layman. The report in question gives no details as to the nature of the diet used nor does it describe exact experimental conditions; consequently, it is not entitled to serious consideration, particularly so in view of the great mass of exact evidence which has accumulated to show the astonishing therapeutic effect of cod liver oil.

Although the publications in this field of research are too numerous to mention in detail, the author cannot resist the temptation to quote the work of Sherman and Campbell (1) who pointed out that a certain proportion of the antiophthalmic vitamin A in the diet would suffice to support normal growth but would not permit of successful reproduction. Eventually, the animals showed a susceptibility to lung disease at an age corresponding to that at which young adults develop pulmonary tuberculosis. Increasing the vitamin content enabled the animals to grow to full size and to reproduce successfully.

Similarly, such representative investigators as Mendel, Park, McCollum, Hess, Steenbock, Drummond, Mellanby and a host of others have conclusively demonstrated the value of cod liver oil in the diet of infants.

This brings up the problem of how to supply the necessary fat-soluble vitamins in many cases in which cod liver oil either cannot be tolerated because of its disagree-

able odor and taste or cannot be administered because of the necessity of keeping down to a minimum the amount of fat to be metabolized.

It is believed that the problem has been solved satisfactorily by preparing, from cod liver oil, a concentrate—to which the name "Oscodal"* has been given—possessing the therapeutic properties of cod liver oil, without the latter's objectionable qualities (2). The degree of concentration is sufficiently high to permit of mixing the concentrate with sugar and preparing a small tablet equivalent in vitamin potency to one-half of one teaspoonful of cod liver oil.

The therapeutic value of this cod liver oil concentrate has been established beyond doubt (2) (3) (4) (5). An additional point of superiority of cod liver oil concentrate over fresh cod liver oil is indicated in the work** of Dr. Hattie L. Heft of Teachers College, Columbia University. This investigator has found it possible to raise four generations of white rats on a basal diet in which the only source of fat-soluble vitamins was this cod liver oil concentrate, administered in amounts corresponding to 28 milligrams of cod liver oil per day.

In similar experiments in which the source of fat-soluble vitamins was a daily dose of 28 milligrams of fresh cod liver oil, the animals failed to reproduce. This is in agreement with the work of Evans and Bishop (6) who found that it was impossible to secure reproduction successfully upon a ration containing as much as 9 per cent of cod liver oil, corresponding to about 500 milligrams of cod liver oil daily. Further work is necessary in order to establish the reason for this difference in action.

Another advantage of cod liver oil concentrate is that it is tolerated by the most sensitive stomachs and may be used in warm weather as well as in cold, since it furnishes the essential fat-soluble vitamins free from oil. It is thus possible to regulate the fat-soluble vitamin content of milk or other food-stuff without increasing the percentage of fat in the diet.

Regarding the question of dosage, this has been largely a matter of guess-work in the past. As a result, relatively large doses

have been prescribed. In many instances, this large dosage has been the direct cause of digestive disturbances which, undoubtedly, served to limit the use of cod liver oil.

On this subject, McCollum (7) states, "There is no unanimity of opinion covering the proper dosage of cod liver oil for infants. We find that young rats cannot tolerate very liberal amounts (e. g., above 6 to 7 per cent of the diet), without injury. Anyone who has taken the oil knows the tendency to disturbances of digestion which it causes. Experiments on animals show that relatively small amounts exert a profound influence in bringing about the healing of the rickets lesion. It seems logical to believe that many people are now giving children considerably more cod liver oil than is necessary."

It is only within the last year or two that evidence has been adduced to show that a smaller dosage could be used to bring about the desired result. However, this is true only if a highly potent cod liver oil is used. For example, Holmes (8) showed that there was a wide variation in the potency of a number of samples of cod liver oil purchased in the open market. Working with ten different samples of oil, he found that the minimum dose for white rats varied from 0.715 mg. to 18.15 mg. per day. This variation indicates the necessity for knowing the vitamine potency of a given sample of cod liver oil before it is prescribed.

It is evident that the dosage will depend entirely upon the potency which, in turn, must be determined experimentally upon white rats.

Considerable work has been done in an effort to evolve some colorimetric method of determining the potency of cod liver oil. Drummond and Watson (9) and Rosenheim and Drummond (10) have proposed colorimetric methods which were used by the author as the basis for an investigation along these lines.

Nine samples of cod liver oil were tested colorimetrically and a certain order of potency established. On comparing with the order of potency obtained in animal experiments by Dr. Holmes, it was found that in only five samples was there any agree-

ment in potency.

Further work gave additional evidence of the limitations of the colorimetric standardization of the potency of cod liver oil. Different samples of cod liver oil give different shades of color, while some samples of cod liver oil which give an indifferent color reaction manifest a high potency when tested biologically.

Absolute reliance cannot be placed upon the colorimetric method of standardizing the vitamine potency of cod liver oil. As a rough method of approximating the relative potencies of a number of samples of oil of similar origin, the colorimetric method has its uses. It is also of value in testing the activity of a series of fractions prepared from cod liver oil. However, for an exact knowledge of the potency of medicinal oil, the biological method of testing is indispensable. The colorimetric method may ultimately supplant the biologic method, but for the present, the latter is the method of choice.

In standardizing cod liver oil or cod liver oil concentrate, a number of different diets were used from time to time, each of which gave satisfactory results. However, inasmuch as the requirements for fat-soluble vitamins vary with the type of diet used, it is best to select one type of diet and use it exclusively in order that the result obtained may be comparable. Similarly, it is desirable that different manufacturers and investigators should agree upon a given diet to be used by all. Only in this way would it be possible to compare the respective findings.

Some progress has been made in this direction, for at present, the preferred biologic method for determining the anti-ophthalmic vitamine A potency of cod liver oil (or of any other source of this vitamine) is that described in the U. S. Pharmacopoeia (11). Briefly, the assay requires that the vitamine A potency of cod liver oil shall be expressed in units per gram of oil, the unit to be the minimum daily amount of cod liver oil required to cure induced symptoms of vitamine A starvation in young albino rats, and to cause a gain in weight of from 10 to 20 Gm. within a period of 35 days, starting after not less than 7 days of stationary or

declining weight on the specified basal diet. No oil may be labeled as assayed by the U. S. P. method unless it contains at least 50 units per Gm. of oil.

As regards the antirachitic vitamin potency of cod liver oil, it is my opinion that it is of greater importance than the antiophthalmic vitamin potency. While cod liver oil is the richest source of both antirachitic and antiophthalmic vitamin, the latter is more widely distributed in foodstuffs and is, therefore, more likely to be present in the ordinary mixed diet. Consequently, the antirachitic vitamin potency of cod liver oil should be known before it is used.

While no specified antirachitic vitamin assay is described in the U. S. Pharmacopoeia, it is generally considered that the method of McCollum, Simmonds, Shipley and Park (12) (or Steenbock and Black's (13) modification of this method) is acceptable for the purpose, the antirachitic unit being the minimum amount of oil per day which will suffice to initiate recalcification in the leg bones of young albino rats, maintained on a rickets-producing diet.

A good grade of medicinal oil ordinarily contains at least 50 antirachitic vitamin units and 250 antiophthalmic vitamin units per Gm. of oil.

Based upon animal experiments with oils of this quality, the commonly accepted dosage is from 1 to 4 cc. (15-60 minims) 3 times daily for children and from 4 to 6 cc. (60-90 minims) 3 times daily for adults. In this connection, Howland and Kramer (14) found that the administration of 2 cc. cod liver oil per day for a period of 2 months healed rickets in a 35 months old baby, while a dose of 2 to 4 cc. daily for 3 to 10 weeks was sufficient to cause active healing.

It is at once apparent that using a potent standardized oil, smaller dosages than have heretofore been used will produce the desired effect. Nevertheless, there are still instances in which even this small dosage is not tolerated. In such cases, the therapeutically active, non-saponifiable, fat-soluble, antirachitic and antiophthalmic vitamin concentrate of cod liver oil is available.

A triple control is maintained on the potency of this concentrate, in that first, the cod liver oil from which it is made is standardized; second, the concentrate itself is standardized; and third, the tablets are standardized, so that each tablet contains an amount of concentrate equivalent in vitamin potency to approximately 2 Gm. (one-half of one teaspoonful) of the cod liver oil from which it is prepared.

Discussing the relationship between vitamin A and disease, a recent editorial (15) states, "In a critical examination of the problem, Bloch (16) has emphasized the contributory role of impaired digestion in the genesis of xerophthalmia. Obviously, if the protective foods cannot be adequately digested and absorbed from the alimentary tract, it is futile to expect them to exert their normal functions. It now appears that when butter fat and cod liver oil, for example, are furnished after the symptoms have developed, the coincident digestive disturbances may militate against the effectiveness of the dietotherapy . . . The situation thus outlined presents the problem of administering the protective or curative vitamin A in some other manner than by the oral route . . . The parenteral administration of fats, for example, by subcutaneous injection, although it has been lauded by a few clinicians, still presents too many objections and uncertainties to encourage its adoption except as an emergency measure. Perhaps progress in the isolation of active concentrates of vitamin A will lead to a more satisfactory possibility of meeting the difficult situations."

Cod liver oil concentrates, the non-saponifiable portion of cod liver oil, is well suited for the above purpose, containing as it does, the antirachitic as well as the antiophthalmic vitamin in a form that is easily tolerated and readily assimilated. There is no need for the digestive apparatus to be burdened with the duty of splitting up a comparatively large amount of oil in order to get at the "minute essentials."

While the exact chemical nature of these fat-soluble vitamins is as yet undetermined, we know by the profound physiological effects which they bring about that without them, life cannot exist. Consequently, every

effort should be made to provide for the presence of these factors in the diet at all times as a prophylactic measure.

*This concentrate has recently been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for admission to "New and Nonofficial Remedies." (*J. Am. Med. Assoc.*, 87, 671 (1926).)

**Unpublished data.

*In a paper presented before the Scientific Section, *American Pharmaceutical Association meeting at Philadelphia, Pa., Sept. 13-18, 1926*, by Harry E. Dubin.

CHEMISTRY AND THE SUPPLY OF DRUGS

(By Norman Evers, B.SC., F.I.C.)

The application of chemistry to the supply of drugs may be said to date back to the beginning of chemistry itself. Chemistry in fact in its earlier stages was evolved largely as a result of attempts to prepare new drugs. The earlier chemistry, however, was chiefly concerned with inorganic compounds. Before the beginning of the nineteenth century natural drugs were used either in the crude state or as various preparations such as tinctures, extracts, etc.

Early in the nineteenth century definite organic compounds extracted from the natural drugs first began to be used. Camphor was first used in this country about 1800. In 1804 the first alkaloid, morphine, was isolated from opium, followed in 1809 by the equally important discovery of quinine in cinchona bark.

The following table is interesting as showing the dates when the most important alkaloids were isolated.

1804—Morphine
1809—Quinine
1811—Emetine
1817—Strychnine, Narcotine
1819—Brucine
1820—Cinchonine, Colchicine
1821—Caffeine
1826—Berberine
1827—Coniine
1832—Codeine
1833—Atropine, Hyoscyamine
1835—Thebaine
1848—Papaverine
1855—Veratrine

1860—Aconitine, Cocaine
1862—Hydrastine
1864—Physostigmine
1868—Quinidine
1875—Pilocarpine
1877—Lobeline
1880—Hyoscyne
1883—Gelsemine
1896—Yohimbine
1906—Ergotoxine
1920—Ergotamine

THE ADVENT OF SYNTHETIC DRUGS

The year 1884 marks the beginning of the era of the production of synthetic drugs, which began from that date to pour into this country, chiefly from Germany, in ever increasing numbers until the Great War temporarily put a stop to them. It is interesting to note that the production of synthetic had its origin in the search for an antiseptic which would be an improvement on carbolic acid, and in particular an antiseptic which could be used internally as well as externally. The ideal antiseptic has not yet been discovered but the search for it has led to many interesting and unexpected discoveries, notably that of phenacetin, which arose from the study of phenol derivatives.

The following table shows the dates of introduction of the most important synthetic drugs:

1885—Aseptol, B-naphthol
1885—Iodol, Phenazone (Antipyrine)
Acetanilid
1886—Salol, Urethane, Hypnone, Thalline
1887—Phanacetin, Amylene Hydrate
1888—Sulphonal, Guaiacol
1889—Exalgin, Chloralamide
1890—Aristol
1891—Phenocoll, Salophen
1892—Guaiacol Carbonate
1893—Formaldehyde
1894—B-eucaine
1895—Lysidine, Lactophenin, Diuretin
1896—Hexamine, Quinosol
1897—Euquinine, Pyramidon, Holo-caine
1898—Euphthalmine, Orthoform,

- Protargol, Thiocol
 1899—Aspirin, Diamorphine (Heroin)
 Acoine, Dionine, New Oftho-
 form, Phenalgin, Xeroform
 1900—Chloretone, Cacodylates
 1903—Barbitone (Veranol)
 1904—Stovaine, Trypan Red
 1905—Ethocaine (Novocaine)
 1906—Phenolphthalein, Aल्पine
 1907—Atexyl
 1908—Atophan
 1909—Arsenobenzol, Bromural
 1911—Adalin
 1912—Luminal
 1916—Optochin, Chloramines
 1917—Acriflavine, Mercurophen
 1918—Vuzin
 1919—Tryparsamide, Mercurochrome,
 Bayer 205
 1920—Butyn, Stibeny, Eucuprin
 1922—Stovarsol

Many of these earlier synthetic drugs were introduced to profession with little reliable physiological testings. The literature of synthetic drug manufacturers of those times indeed remind one of rose catalogues rather than scientific productions in the unstinted praise which is given to the latest productions. The absence of any authority in this country for the testing of such products left the medical profession helpless and confused.

WELL DEFINED PERIODS IN THE HISTORY OF CHEMISTRY

We can sum up the history of chemistry as applied to the supply of drugs by recognizing certain more or less defined periods, namely:

- 1—The period before the nineteenth century when chemistry was occupied in preparing inorganic drugs.
 - 2—1800-1884, the period of alkaloid isolation.
 - 3—1884-1914, the primary synthetic drug period brought to an end by the war.
 - 4—The post-war period.
- Chemistry enters into the supply of drugs in a variety of ways.
- 1—The isolation of the active principles of natural drugs.
 - 2—The elucidation of the constitu-

tion of naturally occurring compounds.

3—The synthesis of naturally occurring compounds.

4—The preparation of drugs by the modification of the structure of naturally occurring compounds with change in physiological action.

5—The preparation of synthetic drugs.

6—The preparation of inorganic drugs and chemicals in a state of purity.

7—The preparation of drugs in suitable form for administration.

8—The analytical control of the supply of drugs.

A DRUGGIST RESEARCH BUREAU

At the fifty-second annual meeting of the National Druggist's Association a report on a Druggist Research Bureau was given by the Committee on Education. An explanation and a chance to contribute was given to all the members of the association. As a result \$15,295 was subscribed. The volume of replies showed that the new idea was accepted favorably by the druggists.

The "Bureau" will be made up of nine men whose duty will be to assemble facts and compare and interpret them. Every druggist will be glad to have a research department investigating facts which will assist him in improving his business. Business men of today realize there is more to business than mere selling. Pharmacy schools throughout the country are seeking facts concerning the retail drug industry. The Bureau of Research plans to satisfy these requirements.

For the first year the "Bureau" intends to investigate "The Sales Value of Window Displays." Pictures of displays and cards requesting results will be sent to the members. The next investigation will be concerned with selling problems. The "Bureau" will also stimulate the activities of the members in the College of Pharmacy. Today's success is a matter of helpfulness and it is difficult for any firm to render genuine assistance to its clients unless it is fully conversant with all the facts. The Druggist's Bureau of Research plans to supply its members with these facts.

PROGRESS IN THE RESALE PRICE LAW

A great deal of legal argument resulted from price cutting, and after much deliberation the law thus established in 1925 was:

1.—It is legitimate for a manufacturer to refuse to sell his articles to those who will not resell them at his suggested prices.

2.—A trader may not sell his articles to others and by contract with them fix the price of their resale.

3.—A trader may not systematically sell his articles to others by methods involving co-operation whereby they undertake to prevent those who do not resell his articles at his suggested prices from obtaining them.

Since 1925 many suits were taken up in courts, but the legislation proved unsatisfactory. Now the following bill is to be proposed, namely that:

All manufacturers shall trade-mark their products so as to render them genuine. All merchants shall sell these products at the standard prices fixed by the manufacturer. The products may be sold at some other price only if the merchant discontinues dealing in such articles, or the merchant proposes to sell such articles in the course of discontinuance of his business, or he has become bankrupt and a receiver has been appointed for his business, or the article has become damaged and the fact made known to the public.

Social News

PHI KAPPAS HOLD FORMAL INITIATION

After holding its informal initiation during the week of February 27, Phi Kappa Omicron Sorority held their Formal Initiation on March 11, 1927. The ceremonies took place at the home of Dean Spease, which was followed later with dinner at the Park Lane Villa. The following members of the alumni were present: Carrie McDowell, Esther Tyler, Charlotte Corner, Ethel Albrecht and Anne Gustonovic. The honorary members included Mrs. Spease, Mrs. Harris and Miss Allen. The pledges

initiated were Mary Kondash, Irene Boris, Emma Pejsa and Lucille Bickford.

On Monday evening, March 13, 1927, a meeting was held at the house of Miss Krivan. At this time temporary officers were elected for the remainder of the school year. The officers are: G. Horsch, President; Mary Kondash, Vice-President; Emma Pejsa, Historian; Lucille Bickford, Chaplain; and Irene Boris, Sergeant-at-Arms. After the election of officers, Miss Krivan and her sister, Valasta, delightfully entertained the girls.

The annual initiation dinner dance of Theta Chapter of the Alpha Zeta Omega fraternity was given March 27, at Wade Park Manor. The programs were of mother-of-pearl embossed with the fraternity crest. Pink coral bridge sets enclosed in a purple leather case also embossed with the fraternity emblem, served as favors. Ed Norman's orchestra furnished the harmony for the light fantastic. This affair was one of the most successful in the fraternity's history.

ANNUAL DINNER DANCE FOR OMEGAS

On Saturday evening, March 27, 1927, Theta Chapter of Alpha Zeta Omega fraternity enjoyed their annual dinner dance. This year it was held at the Wade Park Manor, with Ed Norman's orchestra furnishing the dance music from seven until twelve-thirty. The favors given to each were fit to claim anyone's pride. Three piece bridge sets of pink mother-of-pearl on amber were enclosed in a monogrammed morocco leather case. Thus a clever color arrangement was found in mother-of-pearl and gold, the crest being stamped in gold. The Chapter furnished additional entertainment in having several numbers of vocal music.

Many of the alumni, both local and out of town, attended and were pleased by the splendid way in which the plans had been carried out. The Sless brothers of Alpha Chapter of Philadelphia were present. It was the first fraternity dinner dance for Milford Harris and Norris Schlomberg, the two men just initiated.

KAPPA PSI HAS SECOND INITIATION

Beta Beta Chapter of Kappa Psi fraternity held its second initiation of the school year on Friday evening, February 18, 1927. Of eleven possible initiates only four men were initiated due to probation or financial conditions which prevailed over the remainder of the men. The men initiated were: Jack Axer, of Baltimore, Md.; Ralph Cullinan, of Warren, Ohio; Ralph Blakeway and George Novatny, of Cleveland, Ohio. The initiation ceremonies were given in due form by the active members with the help of many brothers from out of the city which were former actives, Brothers Jewel and Guess of Warren, and Walters of Wooster being a few of the men to represent the other towns surrounding Cleveland. The initiates are willing to admit that they learned many new things about fraternity work after they endured those few short hours of initiation.

After two initiations the active chapter has grown from three to twelve. It is hoped that another initiation will greatly increase the strength of the fraternity. The present actives are: M. Aldrich, H. Heter, C. Young, R. Porter, L. Herold, J. Neely, L. Shebanek, J. Koci, J. Axer, R. Blakeway, R. Cullinan, and G. Novatny. The pledges of Beta Beta Chapter are: T. Carroll, J. Byerley, S. Novatny, L. Rosanski, F. Bihn, McElrov, and E. Schwarzalder. Thus during the last year the strength of the chapter has greatly increased in members and pledges.

The "1927" House Party proved to be another asset to the fraternity's social program. It was thought that a snow storm would prevent many from coming, but the crowd which attended was composed of members from out of town as well as the Cleveland alumni. The dance music was furnished by Nesi's Collegians. The Chapter Committee sprung a surprise by having a novelty punch for refreshments. The punch was obtained from the state of California and proved pleasing to everyone. Card tables were placed in rooms for those who did not care to dance. Mr. and Mrs. Chamberlain were present and stayed until the party was over. Mr. and Mrs. Spease also came and enjoyed the party. The

brothers after doing much work in preparation were greatly pleased in receiving letters a few days after telling how the party was greatly enjoyed and well planned.

The Social Committee at present is planning for other parties, smokers, and a May dance. They are sure of co-operation and are full of enthusiasm.

On March 8th, Dr. E. P. Edwards spoke to the Pharmacy School on the development made in the prevention and cure of tuberculosis.

Dr. A. Caswell Ellis, a director from the Cleveland School, addressed the assembly on March 15th and succeeded in acquainting the students with the scope of work carried on by the school.

Dr. E. L. Newcomb addressed the student body on March 18th. The theme of his speech was the Cut Price Evil.

PHI DELTA CHI HOLDS INITIATION

Alpha Alpha Chapter of Phi Delta Chi initiated five pledges on February 18th at one of the best initiations that the Chapter has ever held. Hell lasted for nine days and was culminated by a rousing banquet at the Chapter House after the final session Friday night. The men initiated were: Henry Gallagher, Henry Breck, Alvin Kuttler, all of Cleveland; Richard Koch of Columbiana, and Earl Cook of Canton.

The alumni turned out in full force to see the new boys take their oaths.

The Alumni chapter was reorganized on the same evening and new officers were elected. C. H. Priebe was chosen president and T. H. Highland was named secretary-treasurer. An active campaign will be instituted and headed by these two men to secure enough money to purchase a chapter house.

Phi Delta Chi held its national convention at Memphis, Tenn., Feb. 10, 11 and 12. Dan E. Sprease, grand president, and W. F. Wargell, active delegate, made the trip together. They secured Cleveland as the convention city of 1928.

Alpha Alpha chapter will hold its formal dance of the year on Friday evening, May 20, 1927.

An addition has been made to the family of Professor W. Hosler. Yes, sir, it's a boy; weight seven and one-half pounds, and named Peter. Congratulations are in order and here's hoping that Peter grows to be as good-natured and as likable as his father.

Word comes from California that former Professor Standford's family has been increased by one.

PARKE-DAVIS TRIP

May 13-14

Pharmacy students are again to have the opportunity of taking a trip through the laboratories of the Parke-Davis Co. The Student Council has decided upon May 13 and 14 as the dates. The latter falling on Friday, permission has been granted to those who wish to remain in Detroit over the week-end to do so.

The Pharmacy School last visited the plant of Parke-Davis Co. April 30, 1925. The majority of the School went and all reports were favorable. The boat from Cleveland to Detroit leaves the dock at 11:30 Thursday evening, arriving at Detroit at 7 A. M. The students are taken to the plant in machines. The day's entertainment is begun with a few short lectures and moving pictures pertaining to the manufacture of serums, vaccines and other biologicals. Following this is a definite itinera through the various laboratories. At noon lunch is served and the afternoon sight-seeing routine gets under way. The students are divided into groups of six and as such are martialed into every nook and corner of the huge plant. About four o'clock the groups are dismissed and are at leisure to see some of the famous city of Detroit. A banquet given at the Statler Hotel is the big event of the day and is a fitting climax to a well spent time. If you are interested in your profession you will more than benefit by this trip. Let us show Parke-Davis that we appreciate their endeavors. The trip occurs on school days so that it will not interfere with other plans. Everyone has been wishing for this event; remember the dates and begin planning for it now.

Sports

PHARMACY QUINTET ON ROAD TO ANOTHER CHAMPIONSHIP THIS YEAR

With only Lang and Captain Vitale gone from last year's championship team, the Pharmacy School basketball team again seems on the road to a group victory. The cup won last year in the Intercollegiate League was the first won by this school in any athletic event.

The players back this year are: Captain-elect Gayok, Scott, Krenitz, Hudson, Anderson and Stockhaus. The new players on the squad are: Pischieri and Schaefer, who play forward and guard respectively. Both of these players have shown up at all games and aided greatly in making a good team.

The cagers have won all their games by wide margins, and the only game lost came as a result of playing with four men. The student manager is Stockhaus, who is playing his third and last year on the team.

The Pharmics will again be in the play-off for the university championship, in which they finished as runners-up to the Kollege Kids last year.

The compiled scores of the games this season are:

Pharmacy School	2; Oaks 0 (forfeit)
Pharmacy School	42; Irish Raiders 9
Pharmacy School	67; Collisions 10
Pharmacy School	45; Oaks 9
Pharmacy School	28; Irish Raiders 36
	(played with four men)
Pharmacy School	2; Collisions 0 (forfeit)
Pharmacy School	47; Eagles 21
Pharmacy School	46; Zeros 14
Pharmacy School	47; Eagles 14

PHARMACY BASEBALL TEAM

The Freshmen are to play the Upper Classmen in a series of indoor baseball encounters. From the two squads will be picked one team which will represent the Pharmacy School against the Parke-Davis nine. Two years ago the Pharmics were

given a drubbing by the latter. This year, however, we're out for revenge. The entire student body is requested to try out for the team so that it will be composed of the best players in the school.

CHECKER TOURNEY UNDER WAY

The "Locker Room Gang" has started a checker tournament to determine the best checker player in the school. The games are played according to tournament rules. Only five minutes are allowed for each move, the touch-move system is employed, and two victories in three games are required to win a series. So far Joseph Koci has the best percentage, having won two series and lost none. J. D. Byerly is a close second with three wins and one loss. Willis Clinton is the dark horse in the race. The other entries are: George Pauer, Samuel Cohen, Rudolph Shreiner, L. Schauer and Myer Karner. Anyone interested in entering should see either Joseph Koci or Myer Karner for particulars.

CASE DOWNS RESERVE

The Reserve five has lost a basketball game to Case for the first time in five years. The game was closely fought and was marked by high scoring. Harkins and Towne played well for Reserve, while Doll and Midnight played best for Case.



Editorials



A MESSAGE FROM THE DEAN

The Pharmacon is to serve as a means of communication between the School of Phar-

macy and its alumni. It is not an alumni magazine in the same sense as are other alumni magazines, but this one will keep the alumni informed in regard to the happenings at the School as seen through the eyes of both student body and faculty. It will tell you what are the opinions of the student body and will be edited by them. It will also give you information in regard to the progress of the various departments of the school and what the faculty are doing and trying to do. The faculty have been given permission to speak through its columns to you.

It is the hope of the faculty that we may arouse some comment and interest from members of the alumni that will make our endeavor both successful and pleasant in the undertaking. We shall not be satisfied unless we receive too many letters to print in the next issue. Send us a note, tell us what you are doing and if you have achieved an eminence in your own community, let us tell others about it.

We believe that you will have the same joy in reading this little magazine that we have in making it.

PHARMACON

The word Pharmacon, which has been selected as the name of our publication and which was suggested by our Mr. W. H. Clinton, a freshman, is one of the oldest words in all pharmaceutical history. As with all words pertaining to Medicine in its genesis, it originally meant a drug, medicine or poison. It is synonymous with the root form pharmaco—which enters into such words of pharmaceutical interest as Pharmacology, Pharmacognosy, Pharmacodynamics, and Pharmacopeia. The Greeks used the word to represent a "select group of medicines which by their virtues do find the approval of the Gods".

Later the name became oriented, at least in application, to Roman usage and in that era we find it as a symbol of medicines and drugs, poisons having been martialed into a class of their own, probably through the Borgia pastime. At the present time, the word is little used in Pharmacy.

COLLATERAL READING

That few Pharmacists heartily indulge in collateral reading is most apparent. To be sure they are not entirely to blame, for, in their school years the average curriculum meted out to them was rather arid, in fact it was dry

as bones. The result of this was that the imagination, that potential source of most advancements, was never awakened, nor allowed to wander into those paths which enrich the owner in myriads of ways in later life.

Thus there is a definite lack of subtleties in the composition of Pharmacists that causes his brothers in the allied professions to tilt the head slightly upward and to cause confusion among the laity, as to his importance to society. These subtleties may be defined as an innate knowledge of those branches of learning which tend to manifest themselves in an educated person or to any one professing to have been educated. That a cognition of Philosophy, Psychology, Logic, Biology or Economics will make a better Prescriptionist is debatable, that it will make him a more complete man, better equipped to serve the public and his profession in an intelligent and honest way, there can be no doubt. Long abstinence from the contact of the Arts if indeed there was ever any intermingling, has bred a certain type of individual, self complacent, mid-self sufficient, highly boistrous or dyspeptic but rarely with other attributes of academic origin worth the efforts of chancleer. The most obvious results of this disunity are many of the present day anamolies so prevalent in Pharmacy; the lack of co-ordination and co-operation among Pharmacists even to the crystallization of laws to their own detriment, the little interest displayed in Public Health activities, the obscure and often embarrassing relations between Pharmacists and Physicians, and the ever present surplus of "Drug Stores" and Druggists. One might name on *ad infinitum*.

The general refutation is that Pharmacists being scientific men have no need of those branches allied to art. The truth of the matter is that no Scientist of today graduates from his profession without having spent his sojourn of at least two years in the company of Kant and Descartes, Bach and Beethoven, Darwin and Lamarck. The time is approaching, if it is not already here when that period shall be extended to four years. Pharmacy has heard the call but as usual is slow in responding. Meanwhile *de die in diem* let us turn to collateral reading. "Reading maketh a ful' man."

❖ Alumni News ❖

This is a clarion call to all the Alumni, whether you are actively engaged in Pharmacy or not. We would like to know where you are and what you are doing. If you can't come in person to see us, drop us a line. We want to bring back some memories of the old days and formulate some in the future for you. There's many an old pal and friend among you. He would welcome some news if it is only a word. Sit down now and let us hear from you. And don't forget that this paper is published for your benefit as well as that of the School's.

Below are the names of graduates of The School of Pharmacy, some recent, some back in the yesterdays who have failed to keep in touch with their Alma Mater. Is your name there?

ALUMNI

1882

W. Blouk
A. B. Calkins
Oscar Coquelin
Sig. Feil
E. A. Fischer
J. S. Hayes
George Kleinim
H. W. Launert
A. E. Melcher
R. Thompson

1884

Henry E. Dehler
Bertha Haven
Otto Prochaska
Eugene A. Spenzer

1885

B. H. Deming
Stephan H. Lederer
L. F. Scheede

1886

A. Bresky
William Bubna
William Burkhardt
H. J. Fischer
J. A. Fitzgerald
G. L. Gehring
George A. Geissler
O. R. Gutjahr
Fred R. Hanrath
William J. Kraemer
Charles Rosenzweig
C. Walz
Albert Wood

1887

John H. Bechberger
Jacob Diebold
Samuel E. Kaestlen
William H. Krug
Charles T. Nunan
Jacob Pfeifer
Fred Schroeder
Julia Washburn
John Yedlicka

1888

Richard A. Buschman
I. J. Emerson
Henry H. Fisher
Philip H. Kohl

1889

George F. Bauch
Russell P. Pelton
John George Schuerer
Otto R. Vontusky
John Zapf

1890

Paul L. Feuer
F. W. Meyer

1891

Herman W. Linde
Harrison G. Wagner

1892

William D. Converse
Solomon Deutsch
John G. Ehrle
Oscar Hetteshcimer

Dewey Frank Howe
James V. Kolachny
John W. Tassell
George Wilhelmi

1893

Frank Ward Hickin
Frank Sanda

1894

Julius Braun
Frank Hanson
Edna A. Hoffman
Frank A. Votipka

1895

Julian Ray Case
Julius Pinhard
A. L. Sharpe
Charles L. Wagner

1896

Henry William Brockman
Albert N. Gilfillan
Andrew S. Guthrie
George Edward Janes
Alfred L. McLaren
Arthur Joseph Peck
Arthur Simon Peck

1897

Joseph S. Davis
Gustav H. Herbersman
Guy E. Keeney
Gustave Andrew Knauer
Wilbur Mohlar
Ashley C. Spencer
George M. Ståhl

1899

Sterne R. Palmer

1900

Simon Davis
Hugh H. McKenzie

1901

Elizabeth L. Bushner
Winfred B. Collins
Samuel A. Klein
Charles A. Laub
J. Carl Seward

1902

Sigmund H. Baehr
Clyde W. Fletcher
Thorwold H. Sells

1903

Arthur T. Hambly
Theodore A. Hulbner
Carl A. Seibl

1904

Lawrence J. Adams
Joseph Feil

1905

Emil Hart

1907

Jacob F. Ackerman
James Crosser, Jr.
O. H. Dawson
George T. Stringfellow
W. F. Walter

1908

Charles C. Aylesworth
Jessie G. Rosen

1910

Orrie Dan Triska

1911

Otto Ebnet

1912

Walter Harry Gillmore
Walter Conrad Meyer

1913

Dr. Harry Spitzer

1914

Cornelius Jos. Cassidy

1915

Julius Charles Cohen
Clayton Zeidler

1916

Louis Halberstadt

1917

Harold C. Dixon
Theodore Victor Panhorst

1918

Adolph Klettke
Leslie Alton Raymond
Theodore Edwin Thress
Jacob I. Tucker

1919

John A. Leithauser
Adolph Wolf

1920

Edwin Joseph Malinoski
Ike Schroeder
Max Abraham Strakoffsky

1921

William Fred Duchac, Jr.
Ralph Hunt Walker

1922

Robert Wilfred McLeod

1926

Joseph Edmund Bakaitis

THE ALUMNI ASSOCIATION

The Alumni Association is quite an important part of the school. Freshmen know little of its functions, but the upper classmen are well informed as to its workings. The Association gives a dinner dance at the Hotel Statler every June on the eve of commencement for the graduating pharmacists. This affair is always looked forward to by those completing their college career and by those who have completed it. The Association also gives valuable aid in any campaign conducted by the school, and also gives a prize to the graduate having the highest average in practical pharmacy during the course.

President, vice president, secretary, treasurer and executive committee comprise the Association officers. These officers are listed below:

President—George Miller, Ph. G. '22, 3402 Beechwood Ave., home; Euclid and E. 107th, business.

Vice President—Paul R. Hudson, B. S. '23, 3131 Washington Blvd., home; Lakeside Hospital, business.

Secretary—William W. Hosler, Ph. G. '22, B. S. '26, 1461 E. 108th St., home; W. R. U. School of Pharmacy, business.

Treasurer—Walter F. Wargell, Ph. G. '25, 2115 Cornell Road, home; W. R. U. School of Pharmacy, business.

Executive Committee

Chairman, 4-year term—Thomas M. Pratt, Ph. G. '04, 16020 Corsica Ave., home; 12438 Superior Ave., business.

3-Year term—Helen Mae Davis, Ph. G. '17, Springfield-Magadore Road, Akron, home; 282 E. Exchange St., Akron, business.

2-Year term—Arthur A. Albrecht, Ph. G. '14, 14418 Woodworth Road, home; Wade Park Ave. and E. 105th St., business.

1-Year term—Yasha A. Venar, Ph. G. '26, 1243 Parkwood Drive, home; W. R. U. School of Pharmacy, business.

As soon as the president, Mr. Miller, returns from his tour of Europe, the officers will hold a meeting, and make plans and preparations for the dinner dance in June.

After this meeting, information regarding the affair may be obtained from any of the above listed officers.

ALUMNI PERSONALS

Mr. Russell Stimpson of '22 is in charge of the pharmacy at the Maternity, and Babies' and Children's Hospitals here at Western Reserve University.

The Marshall Drug Company store at E. 9th St. and Huron Road is managed by Mr. Thomas Rees, Ph. G. of '13. Mr. Turk who graduated from here only last year is the assistant manager at the same store.

Mr. Utermark, a graduate of '22, and Mr. Davis, a graduate of '17, have bought a store at 9701 Euclid Avenue. They are increasing the stock and adding new fixtures. Mr. Davis is also affiliated with the Davis-Wohl Drug Co. in the Bolton Square Hotel.

Mr. Stoerckel, graduate of '26, has moved to Cleveland from Ravenna, O., and is working at Miller's Drug Store at Euclid and E. 107th St. He is also taking a course in advanced chemistry at night school.

Mr. Laurence Shebanel, Ph. G. of '22, has returned to school to complete the work for his B. S. degree and to take up pre-medics.

Mr. Harry Baskind, Ph. G. of '20 is also back at school to get his B. S. degree. He is also here for pre-medics.

Mr. Michael Grega, Ph. G. of '23, now owns his own store at 4810 Clark Avenue. The store is run under the name of The Elite Pharmacy.

Mr. Vic Germ, Ph. G. of '23 is the proprietor of a store at 5963 Mayfield Road, Lyndhurst, O.

Miss Carrie McDowell is the assistant pharmacist at the Pierstorf Pharmacy. She received her B. S. degree in '25.

Sister Mary Paul, Ph. G. '23, B. S. '25, is the principal of Saint Augustine's Convent.

Mr. William L. Arscott, Ph. G. '21 is with The E. R. Squibb & Sons Co. at Kansas City, Mo.

Mr. Paul R. Hudson, B. S. of '23 is pharmacist demonstrator at Lakeside Hospital.

Another man at Lakeside Hospital is Mr. O. Karner, B. S. of '25. Mrs. Karner was Miss Arndt and was also formerly of this school.

Mr. Alexander Dolinsky is another recent member of the alumnus who is now married. He received his Ph. G. in '25 and is working at the Mervic Drug Co., 638 E. 185th Street.

Mr. Harry M. Smith, Ph. G. of '26 has a partnership in the Genset-Smith Co. which has opened a new store at 12011 Detroit Avenue.

Mr. Conrad Schwarzwald, Ph. G. of 1900 has a Rexall store at Willoughby, O. His son is at present a freshman in The School of Pharmacy.

Mr. E. T. Funk, Ph. G. of '19 has bought the Anderson Drug Co. at 65th and Denison Avenue.

Mr. Clarence Priebe, Ph. G. of '25 is staying at the Phi Delta Chi house at 2115 Cornell Road. He is working at Peden's Drug Store, 3459 W. 25th Street. Mr. Peden who is a graduate of '15 tells him of the stirring times had at the old Pharmacy School.

Mr. Paul F. Cusick, Ph. G. of '23 is employed at the Westlake Pharmacy, 1400 Blount Road, Rocky River, O.

William Selman, '24, is now the pharmacist at the government hospital at Ontwood, Ky. He received the appointment through competitive examination.

M. Cohn represented Theta Chapter of the Alpha Zeta Omega at the mid-winter conclave of the Fraternity at Philadelphia last month.

David Zaas, '23, recently braved the seas of matrimony when he married Miss Theresa Pavell March 6th.



Extracts



EPHEDRINE: AN ALKALOID WITH ADRENALIN-LIKE PROPERTIES

A Chinese drug, called Ma Huang, has been in use in that country for centuries. A record actually exists of its use in the year 3200

B. C. The Chinese use it as a diaphoretic, circulatory stimulant, antipyretic, sedative in cough, etc. Its botanical source has been given as *Ephedra vulgaris*, var. *helvetica*. The plant, which is widely distributed throughout Europe and Asia, is used entire. About the year 1885 a Japanese worker isolated an impure alkaloid from this drug. The study of this alkaloid which was called Ephedrine, was continued by others, but it was not until recently that a pure form of this alkaloid was isolated and its chemical nature investigated. Ephedrine is now believed to be B-phenyl-B-hydroxy- α -methyl-ethyl-methylamine. It is thus closely related to adrenalin, and its synthesis has been accomplished.

Pharmacologically, ephedrine has an action on the eye similar to that of atropine—that is, it dilates the pupil. For a long time no other action has been ascribed to it, but quite recently it has been demonstrated that ephedrine has an action similar in many respects to that of adrenalin. Its effects are less pronounced than those of adrenalin, but its action is more prolonged, and it is equally effective when given by the mouth. The average dose of the hydrochloride or sulphate is 0.06 Gm. (1 grain), the dose ranging from $\frac{1}{2}$ to 2 grains. Both these salts are soluble in water.

Ephedrine produces a lasting rise to blood-pressure, due mainly to vasoconstriction. It also excites the sympathetic nervous system, and produces other effects similar to adrenalin. Its most promising application is to the nasal mucosa, as it does not produce the same irritating effects as adrenalin. In rhinitis and hay fever, therefore, it promises to be of use. Of almost equal promise are its effects in asthma; it can be given effectively by the mouth, and will control the symptoms, or at least reduce the number of adrenalin injections necessary. As a general substitute for adrenalin, however, it cannot find extensive employment, as adrenalin is reliable, comparatively inexpensive, and easily obtainable.

Another alkaloid, pseudo-ephedrine or isopseudo-ephedrine, has also been isolated from the same plant, but is practically devoid of action. Some think that this alkaloid is produced in plants grown in different environment, but Holmes thinks it more probable that pseudo-ephedrine is the product of another species.

ISACEN: A NEW SYNTHETIC PURGATIVE

So far, the only synthetic purgative that has been used to any great extent is phenolphthalein, and it is well known that the action of this substance is unequal. Research by a worker in Switzerland has demonstrated that the specific action of phenolphthalein and anthraquinone derivatives depends on and varies with their degree of acidity. The substance having the required degree was found to be dihydroxyphenyl-isatin; this, however, proved to be too irritating to the gastric mucosa. The diacetyl derivative of this substance does not produce irritation, and in all other respects appears to have the properties of an ideal purgative. This diacetyl-dihydroxyphenyl-isatin is known as Isacen; it is a white, crystalline, odorless, tasteless powder, insoluble in water or dilute hydrochloric acid, slightly soluble in alcohol or ether. Isacen resembles phenolphthalein in that the isatin group has somewhat the same general grouping as that of the phthaleins; unlike phenolphthalein in isacen the hydroxy radicals of the two phenol groups have been condensed with the two acetyl groups.

Isacen passes unchanged through the stomach, and acts only in the intestine, where the alkaline contents cause a gradual splitting off of the acetyl, with liberation of the dihydroxyphenyl-isatin. This is said to be non-toxic and to be excreted entirely through the faeces; it does not appear in the urine. Isacen is supplied in the form of small tablets containing 5 Mg. (about 1-12 grain); one tablet is an ordinary dose, but in obstinate constipation as many as three or four tablets may be given.

PLASMOQUINE: A SYNTHETIC REMEDY FOR MALARIA

Plasmoquine or plasmochin is a new synthetic product genetically related to, but not a derivative of quinine, which has recently been introduced as a remedy for Malaria. It is a salt of alkylamino-6-methoxy-quinoline, and is a tasteless, light yellow, finely granular powder, soluble in alcohol, but very slightly so (0.03 per cent) in water. When ingested, it is readily converted into hydrochloride by the acid of the stomach. It is issued in tablets containing 0.02 Gm. (about 2.5 grains) also in dragees containing a mixture of 0.01 Gm. (1.5 grains) plasmoquine and 0.125 Gm. (about 2 grains) quinine sulfate.

At a recent medical conference in Dusseldorf this substance was discussed in several papers. One speaker stated that it had a much wider range of action than quinine, while only one-tenth as much plasmoquine was necessary to secure the same effect. In the Malaria treatment of general paralysis it was found that the most effective dose was 0.02 Gm. three or four times a day. In ordinary Malaria infections it has received extensive trial, and in some cases it has been shown to be superior to quinine. Plasmoquine has several physical advantages over quinine. Being tasteless and causing no by-effects, such as tinnitus, giddiness, etc., it may be given to patients who are intolerant of quinine. It seems also to be particularly well tolerated by children.

PARATHORMONE: THE PARATHYROID HORMONE

Without a doubt the most important development in the study of the parathyroids has been the isolation by Collip of an active extract containing the hormone of these bodies. This extract, which is prepared by acid hydrolysis of the glands, produces its effect by causing the calcium content of the blood-serum to be restored within normal limits. This preparation exhibits a curious analogy to insulin, inasmuch as an overdose may push the rise of blood-calcium to a condition of actual hypercalcaemia that may prove fatal. The close relation of blood-calcium to many pathological conditions opens up a field for this medicament that is almost boundless.

The process for extraction of the parathyroid hormone consists in treatment of the glands with acidified water, removal of fat and neutralization with alkali. The precipitate which forms at the neutral point is removed by filtration and dissolved in acidified water (pH2.5). The solution is again neutralized (i. e. adjusted to (pH7) and the precipitate is again formed. The precipitate is dissolved in acidified water, diluted approximately to the desired potency, filtered through a Berkefeld filter, and submitted to standardization and sterility tests. It is put on the market under the name of Parathormone-Lilly. This preparation is described as "a stable aqueous solution containing the active principle or principles of the parathyroid gland of cattle, and having the property of relieving the symptoms of parathyroid tetany and of increasing the calcium content of blood-serum."

It is standardized by its capacity to increase the blood calcium in normal dogs, one unit being defined as one hundredth of the amount of solution required to cause an increase of 5 Mgms. of calcium in the blood serum of a twenty-kilogram dog, the increase of calcium being determined fifteen hours after injection of the solution. The method of determination of blood-calcium is based on the precipitation of calcium by ammonium oxalate, liberation of oxalic acid by means of sulfuric acid and trituration of the free oxalic acid by means of potassium permanganate.

Experiments with animals have shown that parathormone is cumulative in its effects, and that repeated small doses may raise the blood-calcium to dangerous levels. It must therefore be recognized that this product is a very potent therapeutic agent, and its use may be attended with great danger unless due precautions are taken to avoid over dosage, and consequent development of hypercalcaemia.

OLEUM RICINI

Castor oil, one of the oldest drugs of which we have knowledge, was probably first used in the unrecorded darkness of antiquity. The Palma Christi, from whose beans castor oil is expressed, is best cultivated in the Southern Temperate Zone, while the wild species, however, are found in the Torrid Zone.

Oleum Ricini has been put to many and varied uses—illumination, lubrication, food for silkworms, paper-making, dressing leathers, setting dyes, sacramental and idolatrous rites, and in medicine as an ointment and for a laxative.

It was first used as an ointment by the Egyptians 1000 B. C.; for lighting railway trains in India as recently as 1895, and now it is the principal lubricating oil for airplane motors. Rather an interesting drug—taking into consideration its history and the scope of its usefulness to man. No other drug, so long known, is still used in present-day therapy.

Castor oil, for human use, must be made and kept with greatest care in order to avoid rancidity. It is practically impossible to preserve its purity and prime condition in bulk form, especially if exposed to the atmosphere, when changes are readily discernible—the color altering from clear and water-like to yellow; the odor becoming heavy, rank

and acrid. The physical characteristics of Oleum Ricini differ widely, depending upon its geographical origin, but undoubtedly, it was on the olive slopes along the Mediterranean—in Italy and France—where its cultivation was perfected. However, even the finest oil from this region has a tendency to become rancid owing to the bleaching process it undergoes by the sun's rays.

It is notable that America, at the present time, produces the best oil, and here bleaching is unnecessary as the medicinal castor oil is made from select castor beans which have been thoroughly cleansed from dust and foreign matter. They are then slightly heated to expedite the flow of oil when put through a hydraulic press.

TREATMENT FOR WOOD ALCOHOL POISONING

Methyl alcohol poisoning should be suspected in any case, with the complaints of vomiting, abdominal pains, and sudden blindness, diplopia or dropping eyelids.

The patient should be made to vomit or, if possible, the stomach tube should be passed, provided the patient is not comatose or deeply cyanosed with depressed respiration, and vigorous gastric lavage instituted with an alkaline solution of 1 or 2 per cent sodium bicarbonate or calcium chloride in warm water. After the first lavage, 100 to 150 c.c. of 50 per cent magnesium sulphate is run into the stomach through the tube. Lavage should be repeated three to four times daily for three to four days. High colonic irrigations bi-daily are considered of value.

Lumbar puncture, with draining of the spinal meninges, is usually successful in allaying restlessness and clearing the mental state, and often the cyanosis also. The drainage may be repeated three to four times with benefit, especially with regard to the vision. Hyoscin hydro-bromide *together with* a diaphoretic may be used if the restlessness does not respond to lumbar puncture with spinal drainage.

Elimination, through sweating, brought about by hot drinks, hot packs, steam baths, or diaphoretics as ipecac, apomorphine or pilocarpin in small doses, often produces encouraging results.

The blood CO_2 should be determined by the Van Slyke-Cullen method, and steps should

be taken to combat the acidosis present. To this end sodium bicarbonate in 5 per cent solution has been given intravenously with success. Alkalies are also given by mouth and per rectum by the Murphy drip in doses ranging from .5 gram in a glass of water every 2 to 3 hours until the urine is alkaline to the saturated alcoholic solution of methyl red. Care of course, must be taken not to produce an alkalosis.

The use of an oxidizer as oxygen, to support the circulatory system and relieve the cyanosis, is of value.

Bleeding has been resorted to where there is evidence of circulatory embarrassment.

Potassium iodide solution and arsenous and mercuric iodide have been used to help in the elimination of toxins. Forced fluids, and especially alkalies, are of aid in the elimination of the poison and its products.

Stimulants as caffeine, camphor, strychnine, adrenalin and digitalis have been used and are recommended.

A competent ophthalmologist must be called in immediately to take care of the eye condition.

Pharmaceutical Advance, Vol. VII, No. 81, '26.

TUBERCULINS

During the last few years, intensive and exhaustive study has been made of tuberculosis and tuberculin to prevent it, or rather, to check its progress.

The active ingredient of tuberculin appears to be related to proteins and yet many differences are prevalent so that its exact formula is not definitely known to medical science today. Proteins are made up of amino-acids and are of a very complex nature, very difficult to analyze. They can be broken down into albuminoses, peptones and proteoses which are still proteins but of a lower molecular weight. The active ingredient of tuberculin differs from albuminoses in its great thermostability since tuberculin will remain active after having been subjected to a temperature of 130 to 160 degrees in glycerin for two hours. It differs from peptones in that it is precipitable by ferric acetate. The tuberculin is water soluble and partially coagulable by heat in water, although, as was said before, a high temperature in glycerin will not materially affect the product.

As a final proof that it is a protein, we find a percentage of 14% nitrogen, an element common to all proteins. It can be precipitated by ammonium sulphate, magnesium sulphate, potassium carbonate, ferric acetate, lead acetate, tannin and alcohol.

The tuberculin is usually prepared by precipitating from a growth of bacilli the active protein with one of the above named precipitants, preferably 60% alcohol, since it has been found that this reagent will not precipitate some of the undesirable substances which hinder the preparation of the tuberculin.

The medium used, upon which to grow the bacilli is made up of water, asparagine, ammonium, citrate, potassium acid phosphate, sodium carbonate, sodium chloride, magnesium sulphate, ferric ammonium citrate and glycerol. It has been found that a di-basic radical supports a better growth than a mono-basic one, thus accounting for the number of di and tri-basic acid radicals in the culture media.

SYNTHETIC CAMPHOR

The production of synthetic camphor is becoming an important industry in the United States. It is being fostered by the import tariff on natural and synthetic camphor and will eventually reach the point where the synthetic product will compete in price with the natural product, will counteract the Japanese monopoly, improve market conditions and bring a new source of supply to meet the ever-increasing demand.

The synthetic product is prepared from turpentine, especially that rich in pinene. We happen to have a large supply of turpentine and the only problem now confronting chemists is that of discovering an economical way of making the camphor.

FORTUNE OFFERED FOR CANCER CURE

At a dinner given by President Nicholas Murray Butler of Columbia University, New York City, in the interest of the American Society for the Control of Cancer, it was announced that a Mr. William L. Saunders, New York, has offered a reward of one hundred thousand dollars for discoveries of the causation, prevention, and cure of cancer. The decision on which the awards will be made is to be reached by the American Society for the Control of

Cancer and approved by the American Medical Association and the American College of Surgeons. The offer stands for three years. Fifty-thousand dollars will be given to any person or group who may discover what human cancer is or how it can be positively prevented. A like sum will be given to the discoverer of an absolute cure for human cancer.

HOUSE BILL 297

An opportunity is being presented to the pharmacists of Ohio to better drug conditions in the entire state in the form of House Bill 297 introduced by Mr. Bustard of Cleveland. It is Mr. Bustard's contention that the public is being injured by the present method of selling drugs and pharmaceuticals, and suggests alterations in the existing code to better these conditions. We as pharmacists should turn every effort to secure the passage of this bill.

Crude drugs, patents, package goods of all descriptions are being sold by persons and agencies who have no special training or knowledge which enables them to sell intelligently enough to protect the public health. By allowing these people and agencies to sell we are endangering the health of that public which spends millions of dollars every year to teach the value of good health, and to teach people to rely on men trained to care for them through modern medicine. As a remedy Mr. Bustard proposes that these agencies be licensed by the Board of Pharmacy and be allowed to sell original package medicine only.

In order to contribute to the work that is being done by other health organizations, Pharmacy must retain the confidence of the public. It is certain that it cannot be retained by leaving ordinary drug clerks in charge of a store. A pharmacist should be on the job all the time to give the intelligent service of which he is capable and which is expected of him. If the pharmacist wants the public to protect him, he must protect the public. House Bill 297 provides that a registered pharmacist be physically present in the store at all times.

Should we not back up the public health organizations and help them teach the public to rely on trained men and women for their medical advice and medicines? Every

intelligent pharmacist knows the answers. A bill which will restore the public confidence in pharmacy, cause stringent enforcement of pharmacy laws to the public benefit, and protect the public health demands the active interest of every pharmacist in securing the necessary publicity to put the Bustard Bill across.

Expressed Oil

Mrs. Boyle—Who was that gentleman I saw you with last night?

Mrs. Galen—That wasn't any gentleman, that was a Druggist.

What a fine mass I turned out to be reflectively added the Lead Plaster.

He was a refined boy but he knew his oil.

Col'd Gen'man—Go way from me boy or I'se gwine cut yo tree ways, far, wide and deep.

Second Ditto—One more wud outa yu Bru'thr and I'se gwine surround yu wit coffin handles.

Warden (to criminal in Electric Chair)—Is there anything you would like to do or say before the current is turned on?

Criminal—Yes, Sir; I'd like to get up and give my seat to a lady.

Bal—Who is you stranger?

Sam—I'se a bad bean from Boston.

Bal—H'mph, you ain't no bad bean from Boston, Youse a has-been.

The World's most irritable man has been found; he puts shock absorbers on his jello to keep it from shimmying.

The reason laundry comes so high these days is that they have to hire additional help to tear off the buttons.

Said the inebriated one—"Officer I'm not ash think ash you drunk I am.

Campus Slang

A Pill—One who won't fraternize.

A Bolus—A larger pill.

Gordon Water—See Aqua Juniperus.

Hashheesh—A medley of Ballyhoo.

Nordic—It seems there were two Irishmen.

Phenomena—A mauve precipitate.

Konseals—Brothers under the skin.

Mistura—A crowd of people.

Adeps-Curcuma—A hot-dog sandwich.

To triturate—To force a loan.

Lycopodium—A "slick feller."

Lignum-vitae—Hard-boiled.

Claviceps Purpurea—Smutty.

Hydrangea—A sore throat (7-barks).

Boss Doctor—I takes some of dat ill-natured alceehol, one ounce mathamatic spiruts ob pneumonia and a small viall ob corrogated iron tablets. Yes, Sir; dat am all.

Another last famous line; I didn't know it was medicated.

When better pills are made the U. S. P. will have them.

Customer—How can I ever repay you for your kindness in filling this RxP.

Druggist—By check, money order or cash.

Nux—That's a rather bad cold you have old man. what are you doing for it?

Vomica—Today I'm doing what Smith told me to do, tomorrow is Brown's day and the next is Jones'. If I'm not better by Monday and I'm still alive I'll try my Druggist.

News item—A fire broke out in the Quantitative Chemistry Laboratory last week; it was put out, however, before it could do any real good.

Dryopteris—Is he dumb?

Felix-Mas—He's so dumb that he thinks Scott's best work was Emulsion.

Overheard in Pharmacy—For you I pine, for you I balsam.

Allow us to tell you of Jimmy McGuire Who ran thru the town with his pants on fire

He ran to the Doctor and fainted from fright When the Doctor told him his end was in sight.

What is the use of a man's going to Europe if she can call him by telephone?

THE PHARMACY STUDENT GOES CRAZY

In making Mistura Cretae the glycerine obtained from the fresh livers of Claviceps Purpurea should have an iodine refraction number less than Paracelsus who lived

when Alchemy flourished beneath the entire overground portion of the Eighteenth Amendment necessary to carry out the provisions of the long glandular trichomes found in the quantitative estimation of all apparatus having been thoroughly cleaned with tonics, sedatives and stimulants completely deprived of their outer rind during the latter part of the Rosetta Stone found in specially denatured alcohol which if collected in the Spring will give rise to small bundles of dehiscent natives of Somaliland shipped by way of Nile and Port Said and when shaken down and beaten with heavy clubs guaranteed under The Pure Food and Drugs Act and reacting in the presence of moisture to form nascent groups of monoclinic prisms growing on the sides of the Andes Mts. which the laborers use as a masticatory to give firmness, hardness and plasticity to all the Official Preparations which if carefully gathered and garbled would comprise only one-fourth of the World's cold-pressed Druggists whose active life is only seven years.

Fill 'er up, cried the motorist to the soda clerk, as he ushered his sweetie to the fountain.

"Well, well," commented the loquacious stranger, "things are rather dull in this little town, aren't they?"

"Yep," added the disinterested druggist, "nothing ever happens around here," and he kept on grinding the Potassium Perman-ganate and Glycerin!

Clerk—The boss is always stepping on me.

Second Clerk—Be a live wire and he won't.

Sam—Ah jest been bit by a dog.

Druggist—Was it a rabid dog?

Sam—No, sah, jest a plain ole bird dog.

And what were the results of the bootleg druggist's trial?

More customers.

Ah, Mr. Bokes, and how does your son like being a druggist?

He likes nothing better.

To be sure, added the bull pup, this having my tail bobbed may have improved my carriage, but it certainly interferes with my waggin'.

AAA TO
YAAU!

Life has been described by a scientist as the metabolic activity of protoplasm. It often seems even worse than that on a Monday morning.

Pa, what is a convalescent?

It is a patient who is still alive, my boy.

Why do they call that professor a doctor?

In the first lecture he cured half the class of insomnia. Boy, page the Dean.

Many of us have reduced it to life, liberty and the pursuit of Pharmacy as a profession.

Old lady—Goodness gracious, how can you swear like that?

Modern American Youngster—It's just natural ability plus intensive trainin'.

Simile—"As satisfied as a Druggist who has just made a plaster."

Clerk (leaving)—How about a reference?

Druggist—You'll get a job better without the one I'd give you.

Customer—You said this package contained pure wool and it is plainly marked "cotton."

Clerk—Well, you see, we marked it that way to fool the moths.

Yeah, the Dean said to me, "What is the botanical origin of "Squills?" So I says to him, "It's Squills, isn't it?" So, he says, "Don't ask me; I'm asking you." So, I says, "I don't know, either, Dean."

Absent-minded Professor to soda clerk—My boy, half an hour ago I ordered a malted milk. Have you forgotten it, have I had it, or didn't I order it?

Overheard—A little girl, as she stepped on a scale in a drug store without dropping one cent, said, "Ch, Mama! I don't weigh so much; I only weigh nothing."

Sadie—I wanna roll o' film.

Smart Clerk—Don't let me stop you.

Hank—I wanna tweezer.

Tongue-tied Clerk—You'll have to go outthide if you wanna tweezer.

The strongest man in the world is to appear in New York shortly. It is said that when he wants to open a window in a railroad dining car, he just does it.

Step up boys and guess who she is. She

ponders nothing very slowly and then says it. You're right.

Another for the questionnaire fiends—Who made the first pill and why?

Prof. to students in back row—Can you hear me back there?

Students in unison—NO.

"Waiter, please brig me a dish prunesh."

"Stewed, sir?"

"Shut your mouth and get the prunesh."

Darwinian Child (observing Zoo monkeys)—Pop, do they let them out after they turn into people?

Famous alibies—"Burglars broke into the store of Bert Blert and carried off all the bottles filled with an amber fluid."

No, we do not have Jamaica Ginger in any form.

According to our reverent Dean Spease, the chemical value of man is ninety-eight cents. The chemical value of woman, however, depends upon which drug store she patronizes. And HOW!

The first real cure for dandruff was invented by a Frenchman. He called it the guillotine. It is said that positive results were guaranteed.

Customer—I vant some peppah.

Druggist—What kind do you want, white, cayenne or black?

Customer—"I vant it some wrying pep-pah."

Druggist, surprising clerk kissing his daughter—"What is this, sir? Is this what I pay you for?"

"No, sir, I do this free of charge."

Loud Ballyhoover—A quart of cod liver oil, and hurry up. It's push you need here. That's how I made my money. I pushed and pushed.

Druggist—Well, sir, you'll have to push some more. There's not a drop of cod liver oil in the place.

Cop—Who was driving when you hit that car?

Drunk (triumphantly)—None of us; we was all on the back seat.

Taxi Driver (after patron pays fare)—Here's your receipt, sir.

Patron—Ah, I see. Did I buy the car?

Asked to define "luck," a student wrote: "One time a man was murdered in the street for his money. But he had left all his money in the office. That was luck."

Druggist, after a sale—"Thank you, Madame, call again."

Madame Noveau Riche—"Alright, I will; and you come and see us, too."

The law of supply and demand is inexorable. Thus we have tabloid newspapers for tabloid minds.

"I have just purchased a Thesaurus."

"You can't fool me. Those animals have been extinct for a million years."

BEDTIME STORY FOR TIRED DRUGGISTS

This is Station P-I-L-L broadcasting:

Good evening children, and how are your cash register sales tonight? That's good. I am going to tell you a story of—well—stand-by.

Once upon a time in the year 1927 there was a Druggist conducting a store, which he jokingly had advertised as filling prescriptions. Well one day a young lady did, come into the store with a Rx. This frightened the Druggist so that he immediately reached for the Aromatic Spirits of Ammonia in order to give himself a snifter, having done this six months before when he filled his last prescription. Finally he got up courage enough to speak. "Is there something I can do for you," he managed, thereby coining a phrase never before heard. "Yes," cooed the young one, "let me look at my list. Oh, yes, have you any garden rakes?" "We have one rake," replied the Druggist, pointing to the Clerk, "but I don't know whether he is of the garden variety." "Ha, Ha," laughed the juene-fille, "aren't you the fresh vitello. "However, what have you nice in the way of suicide preparations?" Just then the clock strychnine. "We have bichlorides, phenol and—" "But what are the best people using?" broke in the young one. "This," said the master of the skull and bones pushing a bottle of Carbohc before her optics, "is guaranteed to do the work." "What will it do?" parried the wren. "What won't it do?" shouted the Druggist. "It will not rip, tear or run up the heel and

is a sure cure for housemaid's knee; can even be used on hot and cold sliding doors." "But it is an acid, isn't it?" cooed the damsel. "Yes, it is an acid," admitted the follower of Galen, "but what has that to do with it?" "Well, you see, I am on an acid-free diet," retorted the frail one, "however, I'll take one two-cent stamp from the middle of the sheet and will you wrap it, please?" This tickled the linctus dispenser so much that he added, "Can't I interest you in some Fine Special Deliveries?" "Thank you, so much," ta ta'ed the bambino, "but you might give me a soda." "You mean an Ice-Cream

Soda Water," corrected the Maharaja of the Fizz. "What kind will you have?" "What kind have you?" chirped the little lady, thereby coining a second phrase never before heard. "Chaclet, Strombury, Paneni, and crusht frutt," he palavered. "Oh, splendid," she gurgled, "I'll take pumpkin." This affected the Druggist so much that he went to the Rx desk and wrote out a prescription for himself for 8 oz. of Spts. Frumenti which he charged to exempt narcotics.

Well, Good-night children and don't forget to register the Lysol and Betel Nuts.



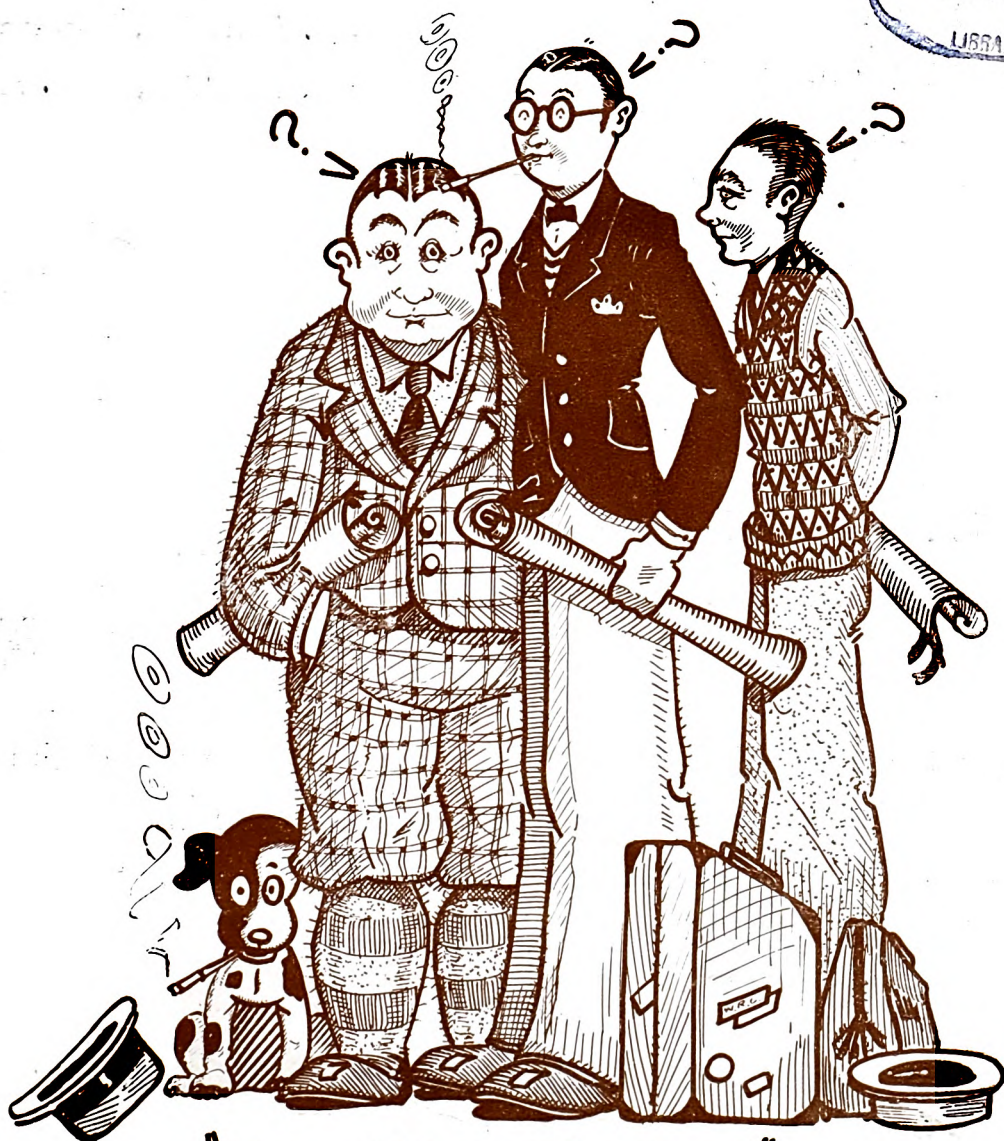
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June, 1927

No. 2



"Where will they go from here?" ~ ~ ~ ~

J.J. STARK

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Hospital Manufacturing

Edward D. Davy

Present day Pharmacy has much to gain and there is much that can be done to increase the professional standing which it deserves in the community.

The pharmacist should present to the medical profession, as occasion arises, the many Pharmacopoeial and National Formulary preparations which are available for his use, instead of quietly passing out the proprietary or semi-proprietary preparations on prescriptions or otherwise for which he may have a call.

It is to acquaint the student with the methods employed in the manufacture of many of these preparations, both official and special formulae, that the hospital manufacturing laboratory is being developed. The amount of any preparation made is usually small in comparison to that of a pharmaceutical manufacturing laboratory but the principle involved nevertheless is the same and could be readily enlarged.

Much time is ordinarily available in the drug store when one man could devote time to the manufacture of special preparations which do not require elaborate apparatus, the basic materials used being the best obtainable. Certainty as to the quality of the crude materials is only possible when they are purchased from a firm whose analytical laboratory checks prove U. S. P. or N. F. quality.

The idea of individuality to a pharmacy must be brought about by the combined initiative of employer and employee and certainly no better way can be found than by properly presenting to the physician and public some preparations, with the contents and manufacture of which the management is thoroughly conversant.

An added advantage in manufacturing training may be gained by thorough familiarity through contact with these preparations. Taking tablet manufacture as a concrete example, few stores will have sufficient demand for tablets to warrant manufacture, yet the details of granulating the various materials either singly or combined, lubricants, coloring, dis-

integration, types of machines, etc., places the purchaser of tablets in a position to know what to purchase to yield the results most desirable and to be able to answer questions concerning tablets or other preparations which he probably dispenses every day.

Products from the manufacturing laboratory go directly to the hospitals and are charged to them on a basis of cost of materials, the overhead being charged to teaching. The students are at all times under the supervision of a registered pharmacist.

New preparations called for by the physicians in the hospitals for experimental purposes are made and all such products as require analysis, are sent to the control laboratory where a check is run on the finished product as well as on much of the crude material.

This procedure enables the student to learn why such analyses must be made and it will also be evidence that he should purchase from the firm maintaining a control laboratory, rather than to buy blindly on price only.

In the teaching of analytical pharmacy many samples for assay are selected from those made in the manufacturing laboratory and previously analyzed, and which represent preparations actively used in everyday hospital practice. Analytical pharmacy, however, is open only to those students taking the four year course.

NOTES ON SOME OF THE BISMUTH PREPARATIONS

Milk of Bismuth

(By Prof. Edward D. Davy)

Much has been written concerning the preparation of the numerous bismuth salts, either for internal administration or for injection. The National Formulary "Milk of Bismuth" formerly "Hydrated Bismuth Oxide", has come in for much comment and revision of formula for its preparation. The chemical composition of the hydroxide is much disputed, but when precipitated in highly diluted

ammonia water, as is ordinarily directed, it is generally agreed that its composition is Bi O (OH) , the other formula sometimes attributed to it is Bi (OH)_3 , the latter being more likely to result from precipitation in more concentrated ammonia.

Bismuth Oleate*

Bismuth oleate is another of the commonly prepared bismuth salts, prepared practically free from excess oleic acid and intended to be suspended in a neutral oil previous to injection. It is ordinarily prepared by the interaction of the acid solution of bismuth nitrate and an aqueous solution of potassium oleate, the potassium hydroxide in the solution of oleate being in sufficient excess to neutralize the excess of the nitric acid. In spite of all precautions in mixing the two, some bismuth sub-nitrate is formed, since it is formed very readily when an acid solution of the nitrate is poured into water or into alkalis.

Dissolving bismuth nitrate in glycerin and pouring this solution with stirring into a hydro-alcoholic solution of potassium oleate has met with some success.

*The oleate and hydroxide of bismuth referred to is the result of work done in collaboration with the Department of Pharmacology.

After the precipitation of the oleate of Bismuth in any case, it is necessary to wash the product thoroughly with water to remove the potassium nitrate and then followed by several washings with diluted alcohol to remove excess oleic acid. Full strength alcohol dissolves the bismuth oleate as well, hence the use of diluted alcohol. The product is then oven dried to eliminate the alcohol and water which are held mechanically. This product, when assayed, is then ready to be diluted with a neutral oil to the proper degree (based on bismuth content), previous to injection.

Bismuth oleate may be obtained in dry form, but it is very difficult to incorporate it in an oil suspension suitable for injection.

Bismuth Hydroxide*

Bismuth hydroxide as ordinarily prepared is of questionable composition and it is the purpose here to enumerate some of the methods tried in an effort to produce a pure product, suitable for injection.

The precipitation of bismuth hydroxide and its clinical application was reported by French workers but must necessarily be definitely proven to be a valuable substitute for mer-

cury when injected in any of the numerous forms proposed for this purpose.

The French method for the preparation of bismuth hydroxide is briefly as follows:—Bismuth nitrate is dissolved in water with the aid of nitric acid, the acid solution of bismuth being poured with stirring into a highly diluted solution of Ammonia. The resulting magma is washed with water by decantation several times and finally transferred to a strainer and the washing continued until the wash liquid no longer indicates alkalinity to phenolphthalein.

In repeating this procedure it was found that the ammonia was readily adsorbed by the bismuth magma and even when the wash liquid from the strainer ceases to give an alkaline reaction, there is still considerable ammonia held in the magma. This is given up slowly when removed, shaken with water and returned to the strainer, several such washings being necessary to remove all the ammonia.

Washing by decantation is practical only until the larger part of the ammonium nitrate held by adsorption is removed, whereupon the precipitate becomes much lighter and requires several days to settle completely.

The resulting ammonia free magma is then assayed and the preparation made to represent—

Bismuth hydroxide	20%
Glycerin	20%
Water	60%

The precipitation when carried out in very dilute ammonia mixes well with the glycerin and the particles do not coalesce as they tend to do in the absence of glycerin.

Bismuth and Glycerin Gel

The above procedure was carried out except that a higher concentration of ammonia was used. The resulting magma did not settle to the same degree as in the former case, but otherwise was stable in diffused light and made a very smooth preparation upon the addition of glycerin. The consistency was that of a heavy cream and there was no separation of the solid material. In the above respects this was far superior to the magma made in dilute ammonia but in about two hours a very heavy colloidal gel resulted. This product jelled to the extent that when the bottles were broken the product retained its original form. Bismuth nitrate when added to the gel caused

it to liquefy but this addition was deemed objectionable. Samples of this gel have remained perfectly white, with no alteration in their physical state over a period of four months.

It was thought that the bismuth hydrate could be suspended in normal saline, so experiments were conducted to see if any reaction occurred when sodium chloride was added to the suspension. The result was the formation of an insoluble chloride of bismuth and sodium hydroxide. In the presence of the alkali, diffused light causes a slow reduction of metallic bismuth, or to the characteristic yellow oxide, the latter forming more readily in the absence of glycerin, the former in the presence of glycerin. Thus the suspension must be used without the normal saline addition.

Precipitation was tried with Potassium hydroxide in alcohol and the bismuth nitrate in glycerin and alcohol, the latter to be poured slowly into the former. The result upon washing with water was a yellow magma, indicating the formation of considerable bismuth oxide.

The result of assays of these magmas for nitrate based on dry material calculated to bismuth subnitrate, showed from three to thirty percent, the amount varying with the method employed in the precipitation. This shows the necessity for assaying the finished product for nitrate, the minimum being desirable.

Tapley and Giesey report in the January, 1926, *Journal of the American Pharmaceutical Association* on "The Light-Sensitiveness of Bismuth Subcarbonate." This yellow color they have referred to as particularly characteristic of the compound and is not due to impurities such as silver as was formerly supposed. It may be inferred from the yellow color produced by sodium or Potassium hydroxides on bismuth hydroxide even without exposure to light, that a slight alkalinity and moisture in the subcarbonate may easily produce the color to which they refer.

A STUDY IN MENDELIAN DOMINANCE

ESTHER TYLER

Introduction

When Gregor Mendel raised garden peas in the garden of the Augustinian Monastery at Brunn, Austria, he found that by crossing a tall variety of pea to a short variety the first filial generation was like the tall parent. This

property of a character "covering up" another character is called dominance. As pea plants are not self-pollinating it was known that each parent had given a factor toward the constitution of its progeny so it would be expected that the offspring would be half way between the two. Mendel and his followers have since shown that all characters are either dominant or recessive.

The object of this work is to study dominance in the length and area of the wings of the fruit fly, *Drosophila melanogaster*. It is known that if a long winged fly is crossed with a vestigial winged fly the F_1 generation will be long winged. Will dominance be complete? Will the F_1 wings be as large as those of the long winged parents?

This work is being carried out in the biology laboratories of Western Reserve University under the direction of Dr. A. H. Hersh, who has been very kind in giving me the necessary stocks of flies and permitting me to use his incubator and other apparatus necessary for good results. His interest and encouragement have been of great value to me.

Biography.

Drosophila melanogaster are the small flies seen around fermenting fruit which is their chief source of food. They lay minute long white eggs which have two projections from one end and by means of which the egg is attached to the surface upon which it is deposited. From the egg hatches the larva or maggot which eats rapidly and grows by shedding its skin as it becomes too small. When it has grown enough it crawls up out of the food and becomes motionless. Its skin dries and is known as the pupa case and the remainder of the larva undergoes a complete change in appearance, emerging in a couple days as an adult fly or imago. Under favorable conditions it takes about ten days for a complete life cycle.

Materials and Method

The stock for the long winged parents was full winged flies with forked bristles. The short winged parents were chosen from a stock of vestigial winged flies.

Four crosses were made:

- (1) Ten virgin long winged females were crossed to ten long winged males.
- (2) Ten virgin long winged females were crossed to ten vestigial winged males.

- (3) Ten virgin vestigial winged females were crossed to ten long winged males.
- (4) Ten virgin vestigial winged females were crossed to ten vestigial winged males.

These crosses were placed in eight ounce wide mouth bottles containing food made by heating fifty parts of water with one part of agar and adding fifty parts of crushed banana. A piece of paper towel was placed in each bottle to absorb any excess moisture. The bottles were stoppered with plugs of cotton. These bottles were then placed in an electrically heated oven kept at 25 degrees centigrade. At the end of a week, the parents were removed as most of the eggs had hatched and the larvae had developed far enough to pupate.

Each day as the flies emerged from the pupa cases they were shaken out and etherized. They were kept in the ether long enough to kill them or as it is spoken of "over etherized." This causes the wings to spread and be in a suitable position for removal. The sexes were separated and preserved in vials of alcohol until used.

By putting only ten pairs of flies in each bottle containing about fifty grams of food there is no danger of over crowding and thus causing smaller flies due to poor environment rather than a difference in constitution.

Only the right wings of the females were used in order to eliminate differences due to sex and right and left side of the body. The wings were removed by means of teasing needles under a binocular microscope. They were placed on a glass slide, covered with water and magnified on a projectoscope which is an inverted microscope arranged so that the image is thrown down upon the table top and can be drawn by placing a paper in position and outlining. Using the same magnifying power, a slide graduated in millimeters was magnified and marked upon a card to be used as a ruler. By measuring the wings with this magnified scale the wing length could be given in millimeters direct. Fifty wings from each cross were drawn and measured.

Results.

Long X Long wings have a mean length of $2.171 \pm .015$.

Long X Vestigial wings have a mean length of $2.203 \pm .009$.

Vestigial X Long Wings have a mean length of $2.171 \pm .008$.

Vestigial X Vestigial—not determined.

The results show that contrary to the general rule dominance appears to be complete. This result is by no means conclusive.

Conclusion.

The length of the vestigial wings when obtained, will be used to make comparisons. The evidence collected is not sufficient to make the statement that dominance is complete in this case. To further confirm the present results I will measure the length of the male wings. I also intend to measure the areas of all the wings by the use of a planimeter. Varying temperatures have different effects upon a character. It is known that vestigial wings increase greatly in size at temperatures higher than 25 degrees centigrade. At the present time I am raising the same four crosses at 30 degrees centigrade in order to determine if the difference in temperature will have any effect upon the result.

QUININE

Cinchona was discovered in Peru by the Jesuit missionaries between 1600 and 1630. It was introduced into Europe soon afterward. In 1638, Ana, Countess of Cinchon, wife of the Viceroy of Peru, was cured of malaria by the powdered bark. She was instrumental in having the drug sent to Spain. From Spain the knowledge and use of the bark gradually spread to Europe and to countries under European control.

In 1820 Pelletier and Caventou, Professors in the Paris School of Pharmacy, isolated quinine. Its value was recognized, but its intense bitterness was dreaded and it was abhorred by the sick. Many attempts were made to disguise the taste but to no avail.

In 1859 Markham, a professional traveler, visited Peru and was quick to observe that the cinchona trees were being decimated for their bark. He realized that it would not be very long before the world would be without quinine. Markham induced the British government to plant the trees in India. He was commissioned to accomplish the task and set out vast groves. Markham made possible a greater

supply and was instrumental in cheapening the product until it was within the reach of all.

Quinine has played its part in American history also. The pioneers knew nothing of the origin and source of malaria, but they knew in some way or mysterious manner that quinine cured the malady. As an anti-malarial quinine acts directly on the cause of the disease—the plasmodium of the blood—thus affording a rare instance of real medication.

Quinine, as generally indicated by the layman, is the quinine sulphate of the pharmacopoeia and is by far the most widely used. Quinine, chemically speaking, is an alkaloid and is prepared from the sulphate by adding to the solution a quantity of ammonia water, or solution of sodium hydroxide, just a sufficient quantity to cause a precipitation of the alkaloid. Quinine sulphate is prepared by exhausting cinchona bark, by boiling with water acidulated with hydrochloric acid and adding milk of lime in excess. The quinine is precipitated with lime and the dried precipitate is digested with alcohol; the alcoholic solution of quinine is evaporated, and the mass dissolved in water acidulated with sulphuric acid. The hot solution is treated with animal charcoal to decolorize it, and then set aside to crystallize. Strictly speaking it is not a neutral sulphate although commonly so regarded. It contains two basic radicals to one acidic and is therefore a diquinine sulphate or a quinine subsulphate.

Referring again to quinine, the alkaloid, its chemical structure, has been the subject of much recent study by chemists and the problems appears to have been practically solved although up until the publishing of the last Dispensatory it had not been made synthetically. Quinine is a methoxy-cinchonine. When oxidised by chromic acid quinine is broken up into quininic acid and a substance called meroquinine. The former of these is the methoxy derivative of quinoline-4-carboxylic acid. Meroquinine, on further oxidation, yields loiponic acid which is an ethyl-methyl-pyridine.

The soluble salts of quinine are precipitated by the ordinary alkaloidal reagents, such as tannic acid, the alkaline carbonates and hydroxides, the iodides, etc. In addition to this, they are precipitated by certain organic acids especially the benzoates, salicylates and tartrates. There is a widespread belief that a poisonous substance—quinotoxin—is formed

by the interaction between quinine and acetylsalicylic acid, but Sollman asserts that the compound formed in this reaction is really quinicin and is of low toxicity, although not possessed of the therapeutic properties of quinine.

Quinine has a large number of varied uses. While its antiseptic value is comparatively low against certain bacteria it is peculiarly efficient. McDonald has shown that the sulphate will inhibit the growth of typhoid bacillus in the strength of 1 to 30,000, and Schaffer, that 1 to 10,000 will inhibit the growth of diphtheria. Among the unicellular organisms in general the protozoa are more susceptible than the bacteria, but the drug is peculiarly poisonous to the plasmodia of malaria.

According to Roth, quinine causes a pronounced leucocytosis; at first there is an increase in the number of lymphocytes which he believes is due to the contraction of the spleen and lymphatic tissues, but later there is an increase in the number of polymorphonuclear cells. According to De Santoro, the continued use leads to an increase in the number of both red and white cells in the blood.

For many years it has been taught by pharmacologists that quinine has a marked power of lessening heat production in the body by retarding nitrogenous metabolism. This has been combated within the last few years and it has been found that even though the quinine does not lower the body temperature, it prevents the rise of temperature after violent exercise and in febrile patients often gives rise to distinct lowering.

Although the value of quinine in the treatment of malaria is recognized and accepted as final, its use as a prophylactic against this disease is much disputed. The chief trouble in giving quinine as a prophylactic is that too small doses are given at too infrequent intervals, and consequently the blood has an irregular flow of white and red corpuscles, whose number is increased by the quinine.

As was said before, quinine is used extensively in the treatment of certain febrile conditions, such as typhoid, to lower the body temperature, but in some cases possesses a marked curative action. This has been demonstrated in the treatment of pneumonia, where various salts of the drug have been shown to have a very strong germicidal action on the pneumococcus and that the blood of patients taking large doses of quinine acquires pneumococ-

cidal properties. The evidence of its value in the treatment of influenza is based purely on clinical evidence. A questionnaire was sent to a large number of hospitals in southern Europe and it was found that although the quinine had no direct therapeutic action on the influenza germ, those people who were taking quinine for malaria infection recovered quicker than did others when they contracted influenza or pneumonia, indicating a possible therapeutic value in the treatment of this type of disease.

Because of its effect on destructive metabolism, as well as its effect as a bitter on the stomach, quinine is a valuable remedy in the treatment of various forms of malnutrition. In Graves disease it appears to have an effect of not only restraining excessive catabolism, but also to have a general sedative influence on the nervous system.

Because of its destructive effect upon various forms of bacilli, it has been used in amebic dysentery.

Quinine possesses marked local anesthetic powers and was at one time considerably used as a substitute for cocaine. For this purpose the hydrochloride of quinine and urea is generally used.

The dose of quinine varies according to the nature of the disease and the susceptibility of the patient. For a tonic effect three to five grains are given three or four times a day. The antipyretic dose is from fifteen to twenty grains. Twenty-five to thirty grains have been administered hypodermically in cases of pneumonia. In the milder forms of malaria, five to ten grains are given every hour until about twenty or thirty grains have been taken, and so timing the doses that the last one will be taken about an hour before the chill. In tropical countries, however, doses of seventy-five to one hundred grains are given. These, if given by the mouth because they are likely to provoke emesis, and furthermore absorption is so slow as to be dangerous in these pernicious fevers. For this purpose, the hydrochloride is generally given, and if this proves irritable to the patient because of the acid, a neutral solution can be injected. The most common symptom of quinine administration is a ringing in the ears with an obtunding of the sense of hearing. In larger doses these symptoms are intensified, along with giddiness, severe headache, delirium, stupor, convulsions

and other cerebral disorders.

Besides its effects on the brain, quinine also causes gastric disorders if taken in too large doses. Exceedingly large amounts of it are necessary to cause death, the amount varying with the susceptibility of the individual.

EXEMPT NARCOTIC RULING OF GENERAL IMPORTANCE TO PHARMACISTS

The Internal Revenue Bureau has recently ruled that *prescriptions* calling for narcotics in what is known as exempt quantities (morphine $\frac{1}{4}$ grain, heroin $\frac{1}{8}$ grain, opium 2 grains, codeine 1 grain to the ounce) may be sold the same as an exempt proprietary medicine. That is, a physician may prescribe codeine up to one grain per ounce or opium up to two grains per ounce and such prescription may be filled, and refilled, subject only to regulations governing the sale of official, and proprietary exempt narcotic preparations such as Syrup Cocillana Compound and Sedatole. The rest of the prescription must not be a non-medicinal vehicle, as simple syrup or elixir. The prescription should not be filled unless it is recognized as having medicinal properties without the narcotic, for the purpose and intent of the regulation is to recognize the small amount of narcotic as an adjunct only.

Under the ruling a physician may indicate tincture of opium as a component part of an exempt prescription which has other active medicinal ingredients, provided the opium carried into the finished preparation does not exceed 2 grains per ounce. At the same time it overrides the previous ruling that an exempt preparation (paregoric, for example) could not be made a component part of an exempt narcotic prescription.

It should be remembered, however, that narcotics used in exempt narcotic prescriptions must be registered in the exempt narcotic record, a model form of which may be found in Regulations No. 35, issued by the Bureau of Internal Revenue, U. S. Treasury Department.

FROM OUR CATALOGUE

"Scholarships"

"The School of Pharmacy offers annually tuition scholarships to graduates of Ohio high schools, under the following conditions:

A. One scholarship to be awarded annually on competitive basis to a graduate of an Ohio high school entering the School of Pharmacy.

Candidates for this examination are to be selected by the Committee on Admission on the basis of scholarship, character, and personality of applicants. Candidates must have complied with the requirements for admission published in the catalogue, must have filled out the regular census card of the School, and must file in the Dean's office a written application for candidacy. No application will be considered unless supported by at least three letters of recommendation. One letter should be from the candidate's high school principal, and should include a statement of the candidate's extra-curriculum activities, if any, while in school. The others should be from business or professional men who are acquainted with the candidate's character and personality. All letters of recommendation must be transmitted direct from the writers to the Dean.

The above requirements must be complied with at least fourteen days prior to the date of the examination. Candidates chosen for the examination will be so notified in writing.

Examinations for this scholarship will consist of: (1) General Examination, designed to test general knowledge, range of interest, power of observation, and scientific aptitude; (2) English Composition; (3) Mathematics; the latter designed to test the grounding of candidates in the fundamentals of the subject.

Examinations are in charge of the Committee on Admission, and will be given at the School of Pharmacy to residents of Cuyahoga County on September 13, 1926. Residents of other counties may report at the same place, or make arrangements satisfactory to the Committee to have the examinations administered by their local high school principal or superintendent on the same date.

Results of the examinations will be interpreted in accordance with the best available information as to each candidate's past record, character and personality.

B. One scholarship to be awarded annually by the vote of the faculty at the end of each year to the freshman student judged by faculty vote to rank highest in scholarship, character and effort.

The value of each scholarship is the equivalent of the tuition fee of the next year of the

candidate's residence in the school, exclusive of matriculation fees, laboratory fees, etc. Each may be renewed by faculty vote for succeeding years of the holder's residence in the School.

The faculty reserves the right to withhold either or both of these scholarships in case no candidate of evidently outstanding merit appears. Either may be discontinued by vote of the faculty at the end of any semester in which the work of a holder is unsatisfactory.

Do you know some worthy boy or girl who would like to compete for scholarship A—that is open to all prospective students?

PRACTICAL EXPERIENCE

A new book has reached our library—"BASIC MATERIAL FOR A PHARMACEUTICAL CURRICULUM". It is the published survey of pharmacy recently made through the Commonwealth Fund of New York under the guidance and direction of Dr. W. W. Charters, then of the University of Pittsburgh, and now of the University of Chicago. Dr. Charters had help and co-operation from many members of the American Association of Colleges of Pharmacy, the National Association of Retail Druggists and the National Association of Boards of Pharmacy. We shall try to give you from time to time some of the recommendations made by this survey. It is certain that they will have a tremendous influence upon American pharmacy.

Herein we quote verbatim what the survey has to say about "practical experience". We have talked about having our school classify stores. Do you think we should adopt some scheme similar to this?

"There is a mass of information and techniques which the student can learn only in practice. This information, it has been shown in other professions, can be learned best and most quickly under guidance. Consequently, well-organized professional schools, as in medicine and education, require experience in clinics and practice teaching.

In colleges of pharmacy the requirement as to practice in store experience differs. Some require no practical experience; others require half time. But unfortunately in many cases this practical experience is gained without guidance from the faculty with the result that much time is wasted by the student in performing tasks, which, without guidance have

no educational value but which might have very great value if properly directed. Directed practice is immeasurably superior to mere undirected practice.

The content of such a course is of two sorts, information and techniques. The information may be secured by general regulations and by specific assignments of instructors. Techniques are obtained partly from the performance of the duties normally incident to serving in a pharmacy, partly by regulations prescribed by a faculty, and partly by class assignments.

The outlines of the information and techniques to be gained is approximately the following. The student apprentice should be afforded opportunity to:

1. Put up for sale drugs and galenicals.
2. Sell goods.
3. Learn how and when to buy goods.
4. Check and price goods.
5. Learn to keep accounts.
6. Learn to keep narcotic and alcohol records properly.
7. Learn to make out various government reports.
8. Secure the answers to assigned questions provided by the instructors for use by the students in mastering their courses.

In order that this experience may be of the highest value, the following regulations are suggested as desirable. They are in no case untried. They have been successfully used in other vocational fields.

1. Students should be required to secure their practical experience in pharmacies approved by the college on the basis of the expectation that the students will receive a specified kind and quality of training.

2. All the field work should be directed by the faculties to the extent at least of preparing questions from day to day related to the material of class instruction and requiring the students to obtain the answers to these while securing practice in pharmacies.

3. One or more members of the faculty should be provided with the functions of (a) inspecting pharmacies to ascertain their effectiveness in giving the kinds of training desired by the college; and (b) supervising students during the training period.

4. During each calendar year the student should secure either (a) two summer months

of directed experience in an approved pharmacy as a full time responsible employee or (b) should spend alternate periods (days, weeks, etc.) in class and in an approved pharmacy as an employee for one semester or (c) secure an equivalent amount of training in a model pharmacy of the college or (d) a combination of these or (e) a year's experience before entering the college. Of these the second alternative is preferable because of the possibility of closer guidance and supervision by the faculty.

It is suggested as desirable that experience should be gained in stores which have the following qualifications:

1. The Owner—

- a. To be a graduate of a recognized school of pharmacy.
- b. To be licensed as a registered pharmacist.
- c. To be a member of a local, state and a national pharmaceutical organization.

2. The Pharmacy—

(The business shall consist of a fair proportion of prescription work, drugs, medicines, or sickroom supplies.)

- a. Should include the manufacture of U. S. P. and N. F. preparations—such as may be economically prepared in a retail pharmacy.
- b. Should offer opportunity for compounding physicians' prescriptions and the dispensing and sale of poisons.
- c. Should be provided with complete sets of weights and measures of both systems, Apothecaries' and Metric.
- d. Should have a reasonable assortment of all necessary utensils for the conduct of a pharmacy.
- e. Should have latest editions of U.S.P. and N.F. and Dispensatory on file; should possess standard works on pharmacy, chemistry and materia medica and subscribe to two or more drug journals.

DISTRICT MEETINGS OF THE N.A.B.P. AND A.A.C.P.

The desirability of closer co-operation between the national Association of Boards of Pharmacy and the American Association of Colleges of Pharmacy has long been recognized and a better understanding between these

two boards should result in the working out of many inconsistencies that prevail as between board questions and the significant content of college courses.

It is encouraging to note that steps have already been taken to remedy the situation. A committee of five has been appointed by each of the respective presidents of the above associations and these committees, working jointly, have divided the country into nine theoretical districts. Each district is represented by a chairman; these chairmen are to co-operate and arrange for conferences between board members and college faculties in the respective states of the district at least once a year.

Several of the district meetings have already been held. The meeting of the third district, comprising the states of Ohio, Michigan, Illinois, Indiana, Wisconsin and Kentucky, was held in Indianapolis, May fifth and sixth. The following Ohio men were in attendance: Mr. F. H. King and Secretary M. N. Ford of the Ohio Board; Dean A. H. Raabe of the College of Pharmacy, Ohio Northern University; Dean C. A. Dye of the Department of Pharmacy, Ohio State University and Assistant Professor N. T. Chamberlin of our own School. That something of a constructive nature was accomplished is indicated by the following edited resolutions:

- That greater co-operation be established between boards, faculties and educational systems in their respective states in order that more efficient work may be done in the training of the pharmacist.
- That the deficiencies in fundamental mathematics of the present day student be remedied and the intelligence test be favored as a means of orientation and determining ability.
- That pharmacy graduates who have not fulfilled the boards' practical experience requirements be permitted to take the written work of the board examination and complete the examination before the board, after the experience requirements have been fulfilled.
- That the colleges and the boards, from time to time, exchange copies of previously given examination questions for the purpose of more perfect co-ordination and the elucidation of discussions at future district meetings.
- That the four year course in pharmacy be adopted as early as possible.

Social News

COMMENCEMENT

June and commencement, the two are synonymous. Happy are those few remaining school days before we don caps and gowns and take our place in the academic parade. Joyously and yet sorrowfully we look back upon those days that we have spent at college, which have been the greatest character builders of our lives, happy that at last the first goal of the race has been reached and yet regretting that we must leave our dearest companions and fellows behind. The thrill returns all over again thinking about it.

The men who graduate are to be congratulated. They have proved their ability to meet the first requirements of the battle of life. Fourteen men are to graduate from Pharmacy School at the Forty-sixth Commencement, seven of whom will receive the degree of Graduate in Pharmacy (Ph.G.) and seven who will become Bachelors of Science (B.S. Phar.)

The Forty-Sixth Commencement will be held on June 16th at the Gymnasium facing Adelbert Rd. The academic parade will start at 10:00 A. M. under the guidance of Marshall Gould. Dr. McVey of Kentucky University will give the commencement address. Friends and relatives of the graduates are invited to attend.

Graduates receiving the degree of Graduate in Pharmacy:

George Whitman Brown,
Nicholas Bukstein,
Ladimir Laury Herold,
Thomas Carroll McClain,
Joseph Sobiecki,
Leo Gustav Sutter,
James Speer Neely.

Graduates receiving the degree of Bachelor of Science:

Milard Charles Berger,
Milford Harris,
Hayes John Heter,
Joseph George Koci,
Samuel Lawrence Krenitz,
Robert Paul Gustav Stockhaus,
Yasha A. Venar.

KAPPA PSI GIVES BENEFIT BRIDGE PARTY FOR HOUSE FUND

Beta Beta Chapter of Kappa Psi Fraternity, held their first bridge party of the year on Monday afternoon, May 2, 1927. There were about twenty-three women present, all of them being wives of fraternity brothers. Miss Ruth Pirson and Miss Gertrude Horsch, Pharmacy School students, were also present. Cake and tea were served late in the afternoon, and each player was presented with a powder compact. Mrs. S. Dewey, Mrs. N. Chamberlin, Mrs. H. Lankelma, and Mrs. N. Scribner are responsible for the success of the party.

Individual tables were taken by the above ladies.

KAPPA PSI HAS MAY DANCE

Kappa Psi Fraternity held their annual May Dance at the Park Lane Villa on Friday evening, May 6th, 1927. The dance music was furnished by the Jade Room's six-piece orchestra, with additional entertainment being given by a singer. This year's dance was a most successful one, more than fifty couples being present. Brothers from Warren, Akron, Canton, and other surrounding towns brought their wives or girls and enjoyed an evening of "honest-to-goodness dancing". Dean and Mrs. Spease and Mr. and Mrs. E. Davy were the chaperons at the dance. The ladies were given favors bearing the fraternity insignia.

Beta Beta Chapter's Degree Team conducted the initiation ceremonial work for the Mu Omicron Chapter at Detroit on Saturday, May 14th, 1927. The Mu Omicron Chapter is located at the Detroit College of Pharmacy and is the first chapter of Kappa Psi Fraternity in the State of Michigan. The initiation was held at the Y. M. C. A., twenty-three men being initiated for the new chapter.

The fraternity house will be open during the summer and all wishing to visit the house are welcome to do so.

PHI DELTS MOVE INTO NEW HOUSE

On May 20th, 1927 the Phi Delta Chi fraternity brought their social year to a close with the biggest and most successful event of the year. A formal dance was held in the hall of the Acacia Country Club. Dean

Spease and Mrs. Spease and Mr. and Mrs. Hosler acted as chaperons. Over thirty couples spent a most enjoyable evening dancing to the strains of the Stromberg-Fisher Orchestra. The ladies present were given letter purses with the fraternity insignia on them. The dance was certainly a success from every point and accomplished much in establishing a closer relationship between students and members of the faculty who were present.

The Phi Delta Chi Fraternity is now happily situated in its new home at 11511 Mayfield road. The new home with many added conveniences has imparted new pep and ambitions to the gangs and has proved a great factor in leading all our men to live at the house.

On Monday, May 7th, 1927, new officers were elected to take charge of the Fraternity during the next semester. "Rudie" Schreiner is now president, Lawrence Baldinger, secretary, and Don Kessler, treasurer. Carl Shane now has charge of the culinary department, and Dick Koch is having his troubles as house manager.

Several Alumni have joined us at the new house. Paul Cusick, R. Gilbert, and Thomas Highland are now living with us.

The Phi Delta Chi house will be open all summer and we cordially invite any brothers to come and see us.

At a recent smoker of the Alpha Zeta Omega Fraternity, the members were addressed by Mr. Geo. Miller, President of the Alumni Association. Mr. Hosler, a member of the faculty, also spoke to those present. The entire fraternity promised hearty co-operation and intend to attend the Alumni Banquet, which is the next event.

Plans are being considered for another big outing this summer which will outshine the one of last year.

Many of the members are planning to go to the June Convention which is to be held in Philadelphia, Pennsylvania.

FACULTY ENTERTAINED

The faculty were entertained at the home of Dean and Mrs. Spease on Friday evening, April twenty-ninth. There were three tables of bridge completed; the players were Mr. and Mrs. H. Lankelma, Mr. and Mrs. N. Cham-

berlin, Mr. and Mrs. W. Hosler, Mr. and Mrs. E. Davy, Mr. G. Wagner, Miss E. Bootan, and the Dean and Mrs. Spease. Upon comparing the scores it was found that Miss Bootan, Mr. Lankelma, and Mr. Chamberlin had made the highest scores. Refreshments were served at eleven-thirty and the prizes were then presented. Miss Bootan was given an engraved bronze cake plate; Mr. Lankelma was presented with a beautiful smoking set; while Mr. Chamberlin was consoled with a salt and pepper set. Everyone enjoyed a very pleasant evening.

OMICRONS HAVE SPRING FORMAL

The Phi Kappa Omicron Spring Formal was held at the Hotel West Lake on the evening of May 27th. All of the members and most of the Alumni were present which all helped to make the dance a success. Dean and Mrs. Spease together with Mr. and Mrs. Harris acted as chaperons at the dance. The Sigma Nu Orchestra furnished the dance music.

Election of officers for the coming year was held Monday evening, May 23rd.

PERSONALS

Antoinette Szczytkowski is to be congratulated upon her good work at Columbus. She is now an assistant pharmacist.

Miss Margaret Hewett a former pharmacy student is working at a hospital in Youngstown.

Ruth and Mildred Pirson spent part of the week-end of the P. D. trip in Ann Arbor visiting friends.

Mary Kondash is looking forward to an enjoyable trip to Europe during the summer months. We hope she does not like it well enough to stay and forget about school next year.

Sister Adelaide and Sister Jeanne Marie spent Friday night and Saturday, May 13th and 14th with relatives in Detroit.

Aldrich, Axer, Carroll, and Cullinan have thus far been the only boys of Pharmacy School seen wearing plus-fours on the campus. Oh, girls, let's play tag.

Pete Nesi and his orchestra are going to furnish the dance music at Schluder's Tavern during the summer. We'll be there, Pete.

ing the summer. We'll be there, Pete.

The two outstanding bridge players of the male sex are V. Madde:ena and J. Pischeri. They demonstrated their prowess in playing when aboard the boat going to Detroit. Step up boys and have a try; it costs you nothing. No blanks!

"Mel" Aldrich, Sophomore, seems to be too fast a man for Pharmacy School. He was arrested for speeding and for crossing the white line on Carnegie Avenue a few days ago.

The supremacy of checkers is still held by Koci. The freshmen as yet can not prevent the upper classman from "sweeping the board".

Cloyd Reynard, Freshman, is now working at the Safety Cross Drug Co., which is located at 82nd and Carnegie.

Breck, the Freshman president, was sure a busy fellow last week. He had to pass out the tickets for the P. D. trip and also be the source of information for many students.

Foo'ed again! P. Steidl and C. Shane made a date with a couple of P. D. Co. women but forgot to name the place.

Willis Clinton and Earle Schwartzwalder stayed in Detroit over the week end of the trip to the Parke Davis plant. They had an enjoyable time together.

Philip Saginor and Peter Nesi entertained the Pharmacy students with a duet on the violin and piano at the Statler hotel in Detroit. Harmony boys and how!

Rudolph Plent, a former student at the school, will be married in June. To whom?

Otto Krivan and Frank Tornansky, alumni of the school, attended the Kentucky Derby at Churchill Downs on May 14th.

Mr. Wm. Baldwin, former student of the Cleveland School of Pharmacy, was recently appointed the "Nyal" representative for the northern Ohio district.

WORD FROM THE PRESIDENT OF THE STUDENT COUNCIL

CHARLES YOUNG

The school year is now drawing to a close

and the students will begin to pursue their respective ways. Many will be seen on the campus when school opens in the fall, but others have completed their courses of study and will no longer be greeted as students of this school. In no event, however, do I believe that any feel that the past months of studying have been in vain.

When school opens in the fall everyone realizes that they are facing nine months of hard work but when commencement time comes around in June it is hard to believe that the time has passed so swiftly. There are so many events intermingled with our work that when it is all over we are sorry perhaps that we have not taken a more active interest in the things which give so much enjoyment to all those who participate.

The past year has been most pleasing to me and in no instances have I been sorry that I have been connected with this student body. The students have been very generous with their time and whenever called upon to do something for their own good and for the welfare of the others, they have responded in a very gratifying manner. Through the aid and efforts of the student council members there have been several things undertaken and in every case the results have been fine. Probably the greatest of these is the publishing of our own magazine, a medium through which students and faculty may express themselves and at the same time act as a connecting link with our Alumni. Mr. Snyder our editor-in-chief, has been most faithful and painstaking in making this a success and is deserving of a great deal of credit and thanks from all of us.

I do not think it necessary to enumerate all of the happenings of the year but merely wish to take this opportunity to thank each and every one of the students for the part they have taken in making this school year a success. Especially would I like to thank the members of the Student Council for so kindly co-operating with me and I hope that those who fill their positions next fall will fully appreciate the honor and responsibility which is theirs in the conduction of their offices.

I will close wishing everyone a most pleasant vacation and hoping that I may be back with you next fall.

OUR LIBRARY

Miss Cielinski, assistant pharmacy librarian, tells us that the following books have been recently added to our library:

Ruddiman's Theoretical Pharmacy.
 Park and Williams' Bacteriology.
 Organic Synthesis, Vol. VI.
 Caspari and Kelly (Pharmacy).
 Toxicology Brundage, 15 Ed.
 New German Pharmacopoeia, 6th Ed.
 Properties and Uses of Drugs, Rusby Ballard and Bliss.
 Synthesis of Nitrogen Ring Compounds, Cecil Hollins.
 Indicators, Dr. I. M. Kotthoff, Dr. N. Howell Furman.
 Chemistry of Enzyme Action, K. G. Falk.
 Volumetric Analysis, 11th Ed., W. G. Sutton.
 History of Medicine, C. G. Comstock.
 A Text Book on Pharmacy, A. O. Bently.

ASSEMBLY TALKS

A very interesting talk was given at assembly, April 26th, by Mr. Russell Collins of the Playhouse. He presented a new angle of the trials and tribulations of artists of the speaking stage. He discussed the progress of the new Playhouse just completed on Drury Lane off Euclid Avenue. He made clear its purpose. Mr. Collin's humor was very striking and appealed to all.

Mr. George Miller was the assembly speaker on May 3rd. He told of the accomplishments of the Alumni Association in the past and outlined its future program. An invitation to the Alumni Banquet to be held June 15th, at the Statler Hotel, was extended to the student body. He urged the students to keep in personal contact with the alumni and current news around school.

At assembly May 17th, John F. Berry, registrar of the Dental School of W. R. U., gave a very interesting talk. His theme was "Is life worth living?" He mentioned many points upon which this depends, but used the character of the individual as the nucleus of them all. According to Mr. Berry, everything depended upon the individual and his character as to whether life is worth living or not.

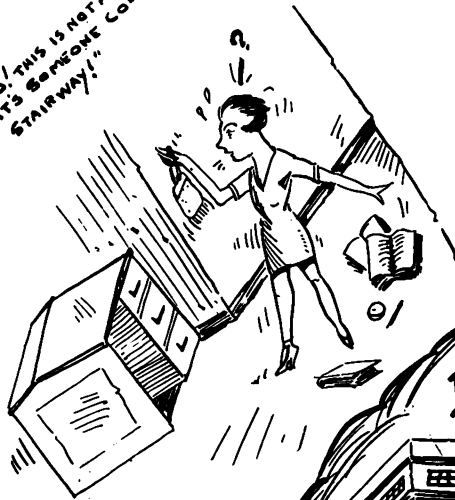
May 24th. Dr. James E. Cutler, Dean, Applied Social Science School was the assembly speaker. His talk was well given and enthusiastically received by the school.

Mr. Robey of the Standard Drug Co. was the assembly speaker on May 31st. His talk concerned the retail drug store and its importance in every community.



BE THAT THE COUNTRY STORE, STRANGER?
NO! THAT'S THE W.R.U. FARMACY SCHOOL, HAR-HAR!!

"No! THIS IS NOT AN EARTHQUAKE.
IT'S SOMEONE COMING UP THE
STAIRWAY!"



Here you go
Boys!!!

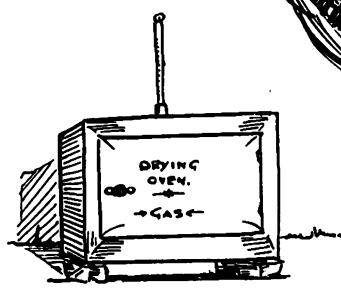


WHERE ARE
THE OTHER
198 SUGGIES?

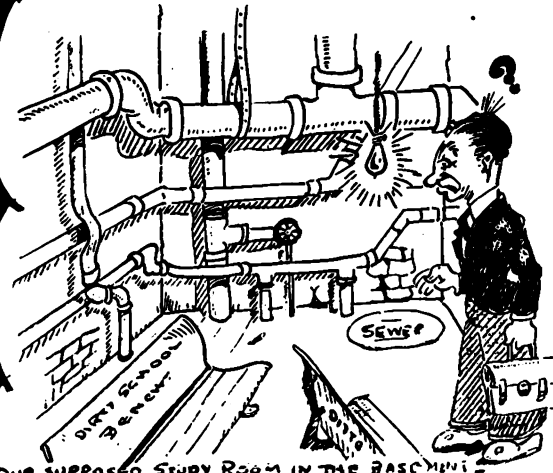
"IN THE
FARMACY
BLUG."



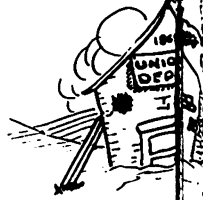
NO MORE
DOGS



ANOTHER ITEM FOR THE
MUSEUM. MODERN PHARMACY
PLUS ANTIQUATED APPARATUS.
EQUALS ~ ~ ~ ~ ? ? ? ?



OUR SUPPOSED STUDY ROOM IN THE BASEMENT
OF THE FARMACY BUILDING. A CHANCE TO STUDY STEAMFITTING!



WE FEEL SOME
BECAUSE WE

AIR CASH

MR. FRANK J. HOAG

Mr. Frank J. Hoag of Kingston, Canada, recently dropped into the school and paid the Dean a visit. He is Vice-President of the Council of the Ontario College of Pharmacy, located at Toronto, Canada. This Council has a representative from each district of the Province of Ontario, and is concerned with matters of the School and the examination and registration of pharmacists in Ontario, Canada.

Graduates of our school who passed the State Board Examinations given at Columbus, April 5th-6th were:

William G. Willoughby.....1963 West Blvd., Cleveland
Vic. or A. Buzzelli.....3232 E. 118th St., Cleveland
Oscar Hornstein.....10014 Westchester Ave., Cleveland
Ludvik Frank Leatk.....12106 Angelus Ave., Cleveland
George F. Cermak.....5503 Clark Ave., Cleveland
David Cohn.....11517 Hopkins Ave., Cleveland
Alexander Belford.....1484 Olivewood Ave., Lakewood
Samuel S. Adelman.....217 12th St., Canton, O.
John M. Simpson.....212 Seminary St., Berea, O.

Those from our school who were successful applicants for the Registered Assistant Pharmacists papers were:

Antoinette E. Szczytowski.....996 Ida Ave., Cleveland
Charles A. Young.....543 Fairchild Ave., Kent, O.
Vladimir Jirasek.....3609 Archwood Ave., Cleveland



Sports



THE OUTLOOK FOR ATHLETICS FOR THE SCHOOL OF PHARMACY IN THE FUTURE

Without a doubt, athletics at the School of Pharmacy have taken an increase in importance. The basketball team has twice successively won the championship of the Theta league. It has displayed a great combination of team workers, and has brought the only two cups ever won for the Pharmacy School.

The Freshmen have shown a classy team to date by winning three straight games. Not only have they exhibited skill but fine sportsmanship as well. These victories have brought no trophies for the school, but they have tended to boost athletics for us.

The school's indoor baseball team also has shown an undying spirit by coming from behind in the last inning to score four runs which spelled defeat for the Parke Davis representatives.

From these we can readily see that athletics here are on an upward grade; and we may truthfully say that in the near future Pharmacy School will boast of as fine athletic teams as any of the departments of the University may have.

PHARMACONS DEFEAT PARKE DAVIS OUTFIT

The Pharmacy indoor baseball team was on the long end of a 4-2 score against the Parke Davis squad. The game turned out to be a pitching duel between Stockhaus and Mark until the fifth inning when Mark was blasted for four runs.

It was only one out and two Pharmacons were on the sacks when the game was called. Both teams got six hits apiece.

The Pharmacons played under a handicap. In the first place, the distance between the bags was twice the official length. In the second place, the ball was smaller than the official size and had seams on it. However, these things did not seem to bother the team much, for it played a fine brand of baseball. In addition, this was the first time in many years we have defeated the Parke Davis ten.

The box score and line-up for the Pharmacons was:

	1	2	3	4	5	R	H	E
Pharmacons	0	0	0	0	4	4	6	3
Parke Davis	0	0	1	1	0	2	6	0

Pharmacons:

Pischere, c	Gayok, r f
Stockhaus, p	S. Novatny, 1 f
Karner, 1 b	Byerly, r s
Schaefer, 2 b	Breck, r s
Aldrich, s s	Clinton, c f
Spicuzza, 3 b	Oberlin, c f

THE PHARMACY FRESHMEN SHOW REAL CLASS IN BASEBALL

The "Frosh" displayed a real ball team in winning three out of three games played within the last few weeks. All the boys have been playing "bang-up" ball. In the first game they completely outclassed the Upperclassmen and handed them an 8-1 drubbing. They garnered sixteen hits most of which went for extra bases. They made only one error. Oberlin pitched superbly and allowed three scratch singles.

The heavy hitting was done by Axer, Spicuzza, and Karner, each getting three hits. Rudolph Schreiner umpired the game.

In the second game the Upperclassmen came out for revenge, but the Frosh were again supreme. The former were able to get only five clean hits off Oberlin's slants. Pischeri pitched nobly for the Upperclassmen, but his work went for naught as his team played erratic ball behind him. Karner was out with a bum foot, but Geiger, who substituted for him, played a brilliant game at first base. He got three hits and made several nice catches. Schaefer hit for the circuit. The final score was 10-3. Mr. Hosler umpired.

In the other game the Frosh, playing with only eight men at the start, decisively defeated a gym-class team from Adelbert. The game went seven innings to a 10-4 verdict. The Pharmacons tallied seven times in the second inning and sewed up the game. Spicuzza started the team to victory with a four base clout which rolled to the fence. Byerly and Karner each got three hits, while Graham, Cohen, and Clinton fielded well.

The box scores for the games were:

	1	2	3	4	5	6	7	8	9	R	H	E
Upperclassmen	0	0	0	0	0	1	0	0	0	1	3	6
Freshmen	0	0	2	3	0	1	0	2	*	8	16	1

	1	2	3	4	5	6	7	8	9	R	H	E
Upperclassmen	1	0	0	0	0	0	0	1	1	3	5	5
Freshmen	5	2	0	0	0	0	0	1	2	10	9	2

	1	2	3	4	5	6	7	R	H	E
Adel. Gym. Class	0	2	0	1	0	1	0	4	6	3
Pharmacons	1	7	1	0	0	1	0	10	11	0

JOE KOCI IS NEW CHECKER CHAMP

Joe Koci defeated Byerly, Clinton, Pauer, Cohen, Schreiner, Schauer, and Karner thereby establishing himself as the first official checker champion of the School of Pharmacy. The games were all played according to tournament rules. Pauer, Cohen, and Byerly were the closest rivals for Koci's checker crown. The champ won all his series, but dropped single games to Pauer, Cohen, and Karner. Clinton lost most of his games by forfeit. Schreiner, after getting off to a bad start, finished strongly. Schauer never offered much competition. Cohen, Byerly and Pauer played consistently well thruout.

On the whole the tournament was a success. Only a few entered this time but we hope to have more next semester.

PHARMACY BASKETBALL

The "Pharmacons" or "Green Tornadoes", as we were known in the Theta league, have successfully completed the 1927 basketball season. We won twelve out of the fourteen games played, losing one to the Kollege Kids in the semi-finals. We entered the semi-finals round determined to win, but the opponents were re-inforced by substitutes while we had none. The final score was 39-28. The play was featured thruout by the brilliant floorwork and shooting of Gayok, Pischeri, and Stockhaus. For the Kollege Kids, Emsch an ex-varsity man, played best.

The score at the half was 17-15 against the Pharmacons. After the first half the opponents slowly forged ahead. We wish to thank the loyal rooters at this time for their fine support rendered thruout the season.

Editorials

THE MEDICAL CENTER

Within the past week Cleveland has witnessed the aggregation of almost nine millions of dollars to be expended upon the crystallization of what is known as the Medical Center. Its purpose is aptly captured in the much advertised phrase, "Where Science and Mercy Meet". Colossal in its scope, magnificent in its vision, humanitarian in its intent, it is composed of and includes the following institutions:

- (1) Western Reserve University Schools of Medicine, Dentistry, Pharmacy and Nursing.
- (2) Babies' and Children's Hospital.
- (3) Maternity Hospital.
- (4) Allen Memorial Medical Library (affiliated).
- (5) The Pathological Institute.

The latest addition is The New Lakeside Hospital, a modern 280-bed "teaching" hospital to be built on the Medical Center campus. As a modern hospital "it is the clinical laboratory of Western Reserve Schools of Medicine, Pharmacy, and Nursing. As a "teaching" hospital it offers the patient the combined intellect of these faculties and its own excellent staff.

As we gazed upon the newly drawn plans of this leviathan "coalition against diseases", our heart swelled within us as we thought of the part the "School of Pharmacy" was to play "in making our city a world leader in medical science".

Not that it is the first time that Pharmacy has been called upon to help make the world safe from disease, for in truth, Pharmacy for a great many years has been functioning in that role. Were it not for her aid and active participation, it would be impossible for our hospitals to exist. The elaborate routine carried on in hospitals involving the preparation, manufacturing, dispensing and use of U. S. P. and N. F. drugs, chemicals and compounds, and which incidentally are the only ones recognized by the Medical profession as having therapeutic virtues necessary to the alleviation of human pains and maladies, can only be efficiently performed through a workable knowledge gleaned by close contact and long study of the subjects of Pharmacognosy, Botany, Chemistry, Materia Medica and Pharmacy per se. Pharmacy as the prime exponent of such, comes into the long overtardy heritage due her, the basic foundation of all hospitals or medical groups. We pause when we consider the calamity that would befall if Pharmacy were suddenly withdrawn from such groups.

But to return to our chart.

Eagerly we began to trace by finger the skeleton of the Medical Center. At the head, the Nurses Dormitory, next a Private Hospital; following which, came Lakeside Hospital, Maternity Hospital, Pathological Institute, Babies Hospital, Medical School, Power House and Medical Dormitory. Like lone sentinels at either end stood the Dental School and Medical Library. We searched in vain for the Pharmacy School. At first we thought that our old indigestion had come upon us. We rushed to The Lakeside Hospital to inquire of "its own excellent staff" about our condition. We were assured we were all right. Perhaps it was our eyes. No, our optical reactions were splendid. We rushed back to our chart. Microscopically we scrutinized it. Sadly at length we admitted to ourselves that our school was not represented. Our gaze wandered slowly upward. It rested upon the word "Rainbow". It took no cognizance of the word Hospital. A childhood story came to our mind. At the end of every rainbow is

a pot of gold. "Hope springs eternal in the human breast".

JACOB LUSTIG



Mr. Jacob Lustig was born in Millersburg, Ohio, in the year 1878. He was graduated at Western Reserve School of Pharmacy and has always shown an active interest in the welfare of that school.

In the year 1895, he received the Certificate of Proficiency, and in 1897, the degree of Pharmaceutical Chemist. Mr. Lustig showed signs of ambition and executive ability at an early age, and after working a short time for Samuel Aub'ey, started a store of his own, in which he continued successfully for a great many years.

Later, Politics beckoned, and Mr. Lustig was elected a member of the State Board of Pharmacy under former Governor Harry L. Davis, which appointment he held in high trust and integrity. Soon after he became President of the Board and in the discharge of his duties, won the esteem and admiration of all men. He has always been actively interested in all pharmaceutical questions involving local, state, or national problems, and there has rarely been a meeting of the N.A.O.D. or N.A.R.D. in which his name has not figured prominently.

In the year of 1900, he married Miss Lena Gleichman. They have two sons, the youngest, Richard Lustig is now living at their home, 3285 Euclid Heights Blvd., and Myron Lustig, a graduate of the School of Commerce and Journalism of Ohio State University, and now on the staff of the New York Times newspaper.

Mr. Lustig has been ill for some time but we are confident that he will return soon to active work for the benefit of all pharmacy.

THE PHARMACY SCHOOL VISITS PARKE DAVIS

On Thursday evening at eleven thirty o'clock, eight-nine students from the Pharmacy School with some of the Alumni boarded "The City of Detroit III" to visit the largest manufacturing concern of its kind in the world, Parke Davis and Co. The boat, a three decked affair, was very well equipped, and served as a safe means of transportation, as well as giving those a thrill who had never before had a ride on the lakes. It also afforded a source of amusement for those who tried to learn all about navigation in one night. The ride came to an end at seven o'clock, Friday morning as the boat docked.

The party was met by two large busses waiting to take them to the plant. They arrived at Parke Davis's doors at approximately eight o'clock, where they were greeted by the reception committee. They were then given a fine breakfast in the large dining room and then conducted through the manufacturing laboratories. Everyone seemed greatly astonished at the size of this plant and was pleased to learn of the various processes used in the manufacture and coating of pills, the production of capsules and ampules, and the packing of tubes, bottles, etc., the latter being done by young girls, several of whom became engrossed in our embryo Pharmacists. The trip through the manufacturing laboratories ended at eleven-thirty, after which a lecture was given in the main assembly room by Dr. Scoville on "The Analysis of Hydrogen Peroxide" and "Biological Assay", both of which proved very interesting, as they were well illustrated by moving pictures. After this a baseball game took place between Pharmacy School and the Parke Davis teams. This proved to be very exciting, but Pharmacy School emerged the victor, defeating Parke Davis by a score of 4-2, which does not indicate the strength of either team, as both played exceptionally fine ball. After the game the visitors were again treated to a splendid meal in the cafeteria of the main plant. Later a fire drill was carried out by the members of the Parke Davis fire force for the interest of the party. At one-thirty the party was conducted through the many biological laboratories, where they witnessed several processes used in the manufacture of biologicals, such as the filtering of antitoxins, operations on dogs and various animals used in biological work. At approxi-

mately four-thirty the trip ended and the visitors were left to their own leisure until six P. M. after which a banquet was given at the Hotel Statler.

This proved to be an enjoyable termination of an interesting trip that will be remembered by all. Entertainment was afforded by several girls, who danced and sang, and brought rosy cheeks to one or two members of our party. Talks followed by Mr. Taylor, Chief Chemist of the company, and Professor Chamberlin on the merits of Parke Davis Products. Mr. Young of the student body also responded, thanking the members of the reception committee and the company for the courtesies extended. The party was presented with some of the Parke Davis Products, shaving cream and tooth paste for the men, cold cream and tooth paste for the ladies. The end of this most enjoyable time came at about nine o'clock.

The party left for the boat at ten-thirty P. M., but several members seemed to have lost their way about the streets of Detroit, as they did not reach the boat until it was time to start. Everyone seemed tired after two days of pleasure and went to their state-rooms soon after the boat got under way. They arrived at seven o'clock, Saturday morning with a more understandable knowledge of practical Pharmacy.

A MAN OF MERIT



During the past two years there has been a man in the School of Pharmacy who has been doing all in his power to keep up the student end of his school life. This man is Charles Young, a member of this year's Sophomore Class. Perhaps it would be interesting to some of us to know more about him. He is

a Hoosier by birth, having been born in Wabash, Indiana, in 1907. A few years later his parents moved to Kent, Ohio, and this has since been his home.

He was graduated at Roosevelt High School of Kent. During his four years there he took part in athletics, playing on the football and basketball teams and in his senior year he was active president of the Student Athletic Association. That he had other interests in school is shown by the fact that he was graduated as Valedictorian of his class. He was one of the few to be elected to the National Honorary Society, and following this he was made president, which office he held until he was graduated. Mr. Young's vacations during the last few summers have been spent in the drug world, and, as a result, he has chosen that profession as a life work.

"Charlie" as he is called by his classmates, entered Western Reserve Pharmacy School in the fall of 1925. At the termination of the Class Elections we find him chosen as president of the Freshman Class. This office entitles him to a place on the Student Council and he was later elected vice-president of the same. When the school year of 1926 opened, "Charlie" was the highest ranking officer from the previous Council to enter school, and as such, he lost no time in arranging and conducting the class elections. This year he has been the Sophomore representative of the Council, having been elected president of it at its first meeting.

Charlie is also Regent of the Kappa Psi Fraternity an honor of which he may well be proud. Polite, courteous, efficient and likable to an extraordinary degree he might well be the emulation of every man in the School of Pharmacy.

This summer he plans to ply the spatula in his home town. We are not certain whether he will be with us next year but there is no doubt that we will miss him intensely if we do not see him on the campus or hear from him in chapel.

Alumni News

MR. HENRY POLLACK

One of the most successful pharmacists who graduated from the Cleveland School of Pharmacy is Henry Pollack. He was born in Cleve-

land in 1874, and received his early drug store experience in several of the old stores of this city.

He graduated from the Cleveland School of Pharmacy in 1894. His first store was located at 46th and Scovill Avenue. Later he opened the Prospect Pharmacy at 649 Prospect Avenue. This is a successful downtown store and has been in the same place for more than twenty years.

Mr. Pollack has been an active member of the Northern Ohio Druggists Association for the past twenty years. He was president of the Ohio State Pharmaceutical Association for the term of 1925-26. During his term of presidency in this organization, Mr. Pollack divided the state into districts which followed the lines of the state senatorial districts, and appointed a district manager in each one. Under his administration there were meetings in every district but one, and he personally attended seventeen of these. This year he is Chairman of the Council of this same organization. He is also an active member of the National Association of Retail Druggists and of the American Pharmaceutical Association. He is a great organization man, and has said, "Membership in drug organizations is business insurance." He is a loyal supporter of everything pharmaceutical, including the School of Pharmacy. He has many friends and no enemies.

MR. A. L. FLANDERMAYER



August L. Flandermeyer, well known in the drug circles of this state, is one of the outstanding members of the alumni of The School of Pharmacy. He entered the drug business as an apprentice in 1891, working after school hours. His apprenticeship was served in the

store of his uncle, Mr. H. H. Flandermeyer who operated a store in this city.

He attended The Cleveland School of Pharmacy for two years, and graduated from Purdue School of Pharmacy in 1900. When he attended The Cleveland School of Pharmacy it was located in the old City Hall and had one laboratory room and one lecture room. The faculty boasted of only three members, Professors Feil, Kuder, and Stecher, and the work was comprised mostly of lectures. He states that the hardest part of the course was to keep awake during the lectures. After completing his college course he took his state board examination, and was registered in Ohio on May 22, 1900.

In 1902 while Professor Arny was Dean, and the school was located at 14th and Central Avenue, Mr. Flandermeyer was elected a trustee of The Cleveland School of Pharmacy. He served in this office until 1911 when Governor Harmon appointed him a member of the Ohio State Board of Pharmacy. He was reappointed a member of the Ohio State Board of Pharmacy by Governors Willis and Cox and served until 1921. Governor Donahey recently appointed him a member for a five year term ending March, 1932.

He has been associated with J. A. Gerlach under the name of Flandermeyer and Gerlach in a drug store located at 3390 West 25th Street since 1901.

He is a member of the Northern Ohio Druggists Association, and is prominent in their activities. The National Association of Retail Druggists and the American Pharmaceutical Association are other Pharmaceutical organizations of which he is a member.

Mr. Flandermeyer's interests are not confined to Pharmacy alone, he having other business and fraternal associations. He is Vice-President and a Director of the Merchants Trust and Savings Bank, of Cleveland, a member of Bigelow Lodge, 243 F. & A. M., and also a member of John K. Corwin Chapter, R. A. M. No. 205.

ALUMNI BANQUET

The Alumni Association will hold its Annual Banquet at the Hotel Statler the night before Commencement, Wednesday, June 15th, at 6:30 P. M.

The members of the State Board of Phar-

macy have been invited, including F. H. King, of Delphos, President; M. N. Ford, of Columbus, Secretary, J. S. Rutledge, of Akron, Chas. Ehlers, of Cincinnati, A. L. Flandermeyer, of Cleveland, (an alumnus of Reserve) and R. C. Kniseley of Ravenna. A record breaking crowd will be present to greet them.

The party will be informal, the food excellent, the music good, the speeches short.

The officers and executive committee are being ably supported by the student body, and the students are calling upon their many friends among the alumni. Their efforts are sure to produce results in the form of several more couples.

Call the school, Cedar 3480 for reservations or details.

The Class of '17 should make this their Tenth Reunion, the Class of '22 should make it their 5th, and turn out en masse. Come on boys, it's your affair!

PERSONALS

Mr. F. S. Bukey, who was in charge of the Botany and Pharmacognosy in our school during the years 1923-1924 and 1924-25, and who returned to the University of Nebraska in the fall of 1925, will spend part of the summer for the Bureau of Entomology in the state at work upon the corn-borer. He will be located at Oak Harbor during the month of June.

Karl Young Streng II, or perhaps they call him "Junior", is the young man four weeks old who has arrived on the wings of the stork at the home of Karl (Ph.G. 1926) and Mrs. Streng on April twenty-first. We have already placed the young man upon the prospective student list.

Sister Mary Paul, Ph.G. 1923, B.S. 1925, is Principal of St. Augustine's Academy, 14808 Lake Avenue, Lakewood, Ohio.

Sister Mary Alma, Ph.G. 1921, is teaching at Annunciation School, West 130th Street and Lorain Avenue, Cleveland.

The faculty expects to see Uncle Sam's "famous gobs": Gus Olson, Forrest Glenn, Louis Varga and Leroy Braun back at the alumni party. Send us a letter, men, so we can have the band wagon out to meet you.

The Doctor's letter speaks for itself:

The Reserve Pharmacan.
Dear Editor:

May 9, 1927.

I beg to acknowledge your publication and as I read the magazine, it brought back memories of long ago, for it was in 1892 that I graduated from what was then called The Cleveland School of Pharmacy, and it was a good school then with working privileges and about three afternoons a week at the school.

The boys in our class were graded higher in the state examinations than those from The Cincinnati College of Pharmacy. I distinctly remember our friendly rivalry and my informant of the grades was a Cleveland member of The State Board of Pharmacy.

Now that I am practicing medicine, I more than appreciate my knowledge of pharmacy gained through the school and behind the counter.

The Pharmacy of today is so cluttered with proprietary preparations, that it seems almost useless to have a Pharmacopeia, or National Formula. But fortunate is the patient whose physician can write his prescription with those books as his text, making for them a simple and more economical medication.

And, too, the Druggist should be considered. He must keep his shelves filled with many of such preparations, perhaps with only an occasional call. This of course does not apply to the medicinal value of the many chemical products now so prominent, but most of the important ones are in either The Pharmacopeia or National Formulary.

But I am drifting from my original thought. I want to congratulate you on your readable magazine which I have enjoyed very much.

To my classmates I send greetings, for this is the only way I can reach them.

Very cordially,

DR. S. L. BERNSTEIN.

THANX

Class of 1892.

Another letter from J. G. Zverina who is going abroad shortly:

May 5, 1927.

The Pharmacon,
2045 Adelbert Road,
Cleveland, Ohio.
Mr. L. J. Snyder, Editor.
Dear Sir:

It was a pleasant surprise to receive a copy of the first issue of the Pharmacon.

I immediately read it from beginning to end and thoroughly enjoyed its well edited pages so full of interesting and informative matter.

It is with pleasure that I herewith enclose my check of one dollar to subscription to the Pharmacon. I trust that it will blossom forth and grow to be a strong connecting link between the School of Pharmacy and its Alumni.

Sincerely yours,

JUSTINE G. ZVERINA.

Mr. O. L. Brooks, graduate of 1925, is planning to spend two months in Europe during the summer. He is going abroad to attend the American Legion Convention which will

be held during the month of September. He will spend the remainder of his time visiting the different countries of Europe. Mr. Brooks is a Kappa Psi Fraternity man and at the present time is the registered pharmacist at Lake County Memorial Hospital, Painesville, Ohio.

KAPPA PSI ALUMNI NOTES

Mr. Nelson Scribner, a graduate of '24, may be reached at Streich Pharmacy at Ford Drive and Euclid Avenue.

Mr. Robert Bartholomew, a graduate of '24, was recently married. At the present time he is manager of Standard Drug Co. store at 55th and Euclid.

Mr. L. Hunt is manager of a Marshall Drug Company store at Union and 93rd street.

Mr. S. B. Dewey is operating a pharmacy in the Bulkley Building.

Mr. Charles Bauer and Mr. Lee Coble are together in the drug business in Akron, Ohio.

Mr. Roland Palechek is working in a branch of the Pake Pharmacy at Akron, Ohio.

Mr. Wade B. Wetzel, a graduate of '22, is now operating a drug store in Amherst, Ohio. He made the trip to Parke, Davis & Company with the student body on May 12th and 13th.

Mr. C. W. Hart is employed by the Marshall Drug Company store at 98th and Lorain avenue.

Mr. Alfred H. Hartman is Manager of a Marshall Drug Company store at 125th and St. Clair Avenue.

Mr. R. C. Cameron is now owner of the former Mayell & Hopp Drug Company on Euclid Avenue.

Mr. Leon N. Hickernell, a graduate of '26, is now assistant Pharmacist at the City Hospital.

Mr. Karl Streng is now Pharmacist at the City Hospital. He is a graduate of the class of '26.

Mr. Alfred Walter and Mr. George Sherlock are now employed at the P. & S. Pharmacy on Euclid Avenue.

Mr. James Jewell, '25, and Mr. Gail Geuss, '26, are now located in Warren, Ohio.

Irene M. Albrecht, Ph.G. of '17, who is now Mrs. G. M. Cunningham, and lives in Detroit, was one of the party on the Parke Davis trip.

Dr. and Mrs. J. A. Hurt were planning to take the Parke Davis trip but were unable to because of a medical case. Dr. J. A. Hurt graduated from this school in 1896. Dock says dog-gone these "obstet" cases.

Through a mistake in the last issue Mr. Otto Gutjahr was reported as one of the missing alumni. However, his name has been changed to the translation of Gutjahr, which is Good-year and is on the files in that form. Mr. Goodyear was secretary of the Northern Ohio Druggists Association for a number of years, and is now residing in Hunting Grove, California.

Dr. Joseph C. Steuer who graduated from this school in 1892 is the father of Dr. L. G. Steuer who is assisting Dr. R. W. Scott in teaching physiology to Pharmacy School students.

Mr. Justin G. Zverina, Ph.G. of '21, has sent in a letter commending the Pharmacon. In his letter he mentioned that he has sold the Zverina Chemical Co. of which he was owner, and is planning a trip to South America this fall. We will be glad to receive a letter from South America in the near future.

Mr. Otto Svec, B.S. '24, who was on the instructional staff of this school for two years, now has a store across the street from John Adams High School.

Dr. S. L. Bernstein, a graduate of 1892, who has an office at 328 the Anisfield Building, recently sent in a letter expressing his appreciation of the Pharmacon.

An old student of this school, Mr. Frank J. Mery who attended in 1892-93, is now the mayor of Toledo, Ohio, where he also runs a store. He was the representative of Lucas County to the House of Representatives during the 85th General Assembly. He was president of the Ohio State Pharmaceutical Association for the term of 1924-25, and is now a member of the Council of that organization.

Another pharmacist-mayor is Mr. Harry F. Guenther who attended this school from 1898 to 1900, and is now the mayor of Lyndhurst Village, Ohio. He was formerly the treasurer of the National Association of Retail Druggists and of the Northern Ohio Druggists Association.

Several of the alumni took the Parke Davis & Co. trip with the school and enjoyed them-

selves quite thoroughly. Those who made the journey are: Mr. Jack Franklin, Ph.G. of '26, Mr. Henry Kumpf, Ph.G. of '26, Mr. Paul Hudson, B.S. of '23, and Mr. Wade Wetzel, Ph.G. of '22.

OUR HOSPITAL PHARMACISTS

Our first issue carried some short notes upon the activities of some of our alumni. By the next issue we hope to have many more notes from ones who have long been silent. It is interesting to note the progress that has been made in the hospitals, especially in and about Cleveland by some of our alumni.

Karl Y. Streng, Ph.G. 1926, is pharmacist in City Hospital. This is Cleveland's largest hospital having about 1200 beds. He has developed a large and modern hospital and has proved his worth to the City of Cleveland in the type of pharmacy that he is conducting. He has as assistant pharmacist: Leon Hickernell, Ph.G. 1926.

Paul R. Hudson, Ph.C. B.S. 1923, is chief pharmacist at Lakeside Hospital and has as his assistants O. R. Carner, B.S. 1925 and Henry J. Bannon, Ph.G. 1924, B.S. 1925.

Russell H. Stimpson, Ph.G. 1923, is pharmacist at Babies and Children's and Maternity hospitals.

George E. Waterbury, Ph.G. 1926, is assistant pharmacist at Cleveland Clinic Hospital.

Among our older graduates are to be found George J. Hoehn, C.P. 1890, pharmacist at St. Luke's Hospital; Everett S. Rubenstein, Ph.C. 1901, at Mt. Sinai Hospital.

Sister Marie Hortense, Ph.C. 1917 Superior and pharmacist at St. Elizabeth's Hospital, Youngstown, has as her assistant pharmacist, Margaret Hewitt, ex-19.

Orren L. Brooks, B.S. 1925, is pharmacist, x-ray operator and laboratory technician at Lake County Memorial Hospital, Painesville, Ohio.

This list shows quite an advancement in hospital pharmacy during recent years in and about Cleveland.

OUR DOCTORS

The following Alumni have received a degree of Doctor of Medicine since graduating from the Reserve School of Pharmacy.

<i>Name</i>	<i>Class M.D.</i>
Michael Albert Albl	1889

Charles C. Aylesworth.....	1908—1889
Samuel L. Bernstein.....	1892—1895
Cornelius Joseph Cassidy	1914—1926
Albert A. Connell.....	1891
Wm. Warren Dangeleisen.....	1913
Rogert Charles Droege.....	1892—1897
Henry Edelstein.....	1897—1900
Herbert E. Edwards.....	1897—1902
Albert H. Gill.....	1893—1901
Oliver C. Hain.....	1890—1897
Ardon P. Hammond.....	1891—1904
Ralph Hertz.....	1911—1917
W. F. Hribal.....	1895—1900
John Albert Hurt.....	1896—1902
Samuel E. Kaestlen	1887
Emanuel Klaus.....	1893
Paul Krebs.....	1888—1894
Harry C. Luck.....	1887—1894
Joseph Anton Neuberger.....	1897
Frederick J. Schmoldt.....	1891—1898
Frederick Brown Snyder.....	1911
Harry Spitzer.....	1913
David B. Steur.....	1891—1895
Joseph C. Steur.....	1891—1895
Louis J. Svetlik.....	1918
Harry Holliday Ward.....	1897—1905
Frederick J. Wood.....	1899
Thomas Young.....	1891
Otto F. Zimmer.....	1904
Moss J. Cramer.....	1900

Degree of D. D. S. 1917

CLASS OF

1887	1896
Samuel E. Kaestlen	John Albert Hurt
Harry C. Luck	
1888	1897
Paul Krebs	Herbert E. Edwards
	Joseph Anton Neuberger
	Harry Holliday Ward
1889	Henry Edelstein
Michael Albert Albl	
1890	1899
Oliver C. Hain	Frederick J. Wood
1891	1904
	Otto F. Zimmer
1891	1908
Albert A. Connell	Charles C. Aylesworth
Ardon P. Hammond	
Frederick J. Schmoldt	
David B. Steur	
Joseph C. Steur	
Thomas Young	
1892	1911
	Ralph Hertz
	Frederick Brown Snyder
1892	1913
Samuel L. Bernstein	Wm. Warren Dangeleisen
Robert Charles Droege	Harry Spitzer
1893	1914
Albert H. Gill	Cornelius J. Cassidy
Emanuel Klaus	
1895	1918
W. F. Hribal	Louis J. Svetlik



Extracts



CHEMISTRY OF INSULIN

Insulin is associated with proteins and none of the methods of purification reported have succeeded in separating an active non-protein substance possessing the properties of insulin. Whether insulin is itself of a protein nature or whether it is merely associated with a protein fraction of the pancreas still remains to be determined.

The physiological activity of insulin is destroyed by proteolytic enzymes, such as pepsin, papain, trypsin or erepsin, which fact accounts for the special procedure of extraction which baffled investigators for many years. Definite proof has been found to show that the destruction by enzymes is due to the splitting apart of the protein molecule, rather than to an inactivation due to the formation of a physical complex of the insulin and the enzymes, although the latter undoubtedly is the first step in the process of destruction by enzymes.

Insulin will not coagulate with heat, it will slowly dialyze through a parchment membrane, and the precipitate which occurs with the addition of nitric or trichloroacetic acid disappears on warming to reappear again on cooling. All of these tests are characteristic of the primary protein. Insulin is insoluble in water, also in ether, benzene and chloroform, but is soluble in glacial acetic acid and phenol. Protein precipitants such as tungstic, tannic and picric acids precipitate it. Insulin is slowly destroyed by boiling with 0.25% sulfuric acid and rapidly destroyed by boiling in a solution barely alkaline. This destruction of activity parallels the splitting of the primary proteose molecule into a secondary proteose.

Purified insulin contains neither carbohydrate or phosphorous. It gives positive tests for protein, tyrosine, histidine, cystine, arginine, and a negative test for tryptophane, purines, and pyrimidines. A positive test for sulfur can be secured. Thus far, then, nothing has been found not of a protein nature.

Thorough investigations of purified insulin by different laboratories have been unable to separate an active fraction free from protein, nor has careful investigation of the active proteose fraction itself shown the presence of other than amino acids—the building stones

of the proteins. Insulin itself may be a biologically specific proteose, or it may be that the presence of a protein or proteose structure is necessary for the successful functioning of some substance of a non-protein nature which has yet defied detection.

MORE MEDICINAL HERBS

Several Countries in Europe Increase Their Plantings

In spite of the immense development of the medico-chemical industry, a large number of plants is still used in pharmacology. The demand for these plants has, in fact, increased in recent years because manufacturers find it easier to derive certain active substances from plants than to produce them synthetically, says the Vienna correspondent of *The Journal of the American Medical Association*.

"To mention only a few," he continues, "digitalis, opium, the principles of rhubarb, quinine, and the principles of marshmallow and aloes are used preferably in natura. As a result, in large sections of Central Europe, and also in France, Italy and Russia, the planting of medicinal herbs has been greatly increased.

"Through the attention given to the subject by the various Governments and by pharmacologic interests, the 'Mitteleuropäische Tagung für Arzneimittelvorsorgung' was recently organized in Vienna, and during the two-day session the various problems pertaining to the collection and the marketing of medicinal herbs were thoroughly gone over. It was decided to make the work international in scope, and a central bureau will be established in Vienna, which will collect and furnish information in regard to all European stocks of medicaments of both vegetable and non-vegetable origin. The organization will inure to the benefit of both producers and dealers. In experiment stations to be erected the best methods of growing the several varieties of medicinal plants will be carefully studied.

"The cultivation of medicinal plants (and also of tobacco) permits the profitable use of soil that is not suitable for grain and cattle raising. The Institute for Pharmacognosy of the University of Vienna has assumed the task of organizing the international committee. It will also work out plans for Government support."—*New York Times*.

CHEMICAL ANALYSIS OF THE TUBERCULOSIS GERM

Chemical analysis of the germ that causes tuberculosis has led to the discovery of a new type of compound, a phosphorus-containing fat, which has peculiar biological properties, according to Professor R. J. Anderson, of the department of chemistry at Yale University.

The tuberculosis bacterium is unique among single-celled organisms in being the possessor of a waxy covering which renders it highly resistant. This is why it can defy the phagocytes which police the body, for instead of being dissolved by them and destroyed, the T. B. organism survives and may multiply after being engulfed. The waxy sheath is so thick that it makes up one-fifth to two-fifths of the weight of the dried bacteria.

Professor Anderson extracted eight pounds of the germs with a mixture of alcohol and ether to dissolve out this waxy coating. He obtained a pound of wax, half a pound of fat proper, and half a pound of phosphatide or phosphorus-containing, fat-like substance. The last material, to which he has given the name phosphosucride, is the most unusual constituent of the germs. It has been shown to contain phosphoric acid, a sugar and fatty acids. This compound differs from all other known phosphorized fats, according to Professor Anderson, and it may be expected to have peculiar biological properties.

While the biochemist is busy probing the formula of the phosphosucride, other investigators are studying it biologically at the Rockefeller Institute for Medical Research, to determine to what extent the destructive powers of the tubercle bacillus are due to this element in its make-up, and whether once identified, it will be of service in the treatment or prevention of the disease.

Other chemists in an analogous way have obtained specific chemical compounds from pneumonia bacteria, which show promise when applied clinically.—"Science, May, 1927."

SYNTHALIN—SYNTHETIC INSULIN

A new compound, claimed to be better than the original insulin, has been prepared and promises to be a boon to the diabetics. Instead of being injected directly into the blood stream, the new substance is taken by mouth.

The new substance is a derivative of guani-

din, a substance well known to chemists, and has been named synthalin by its discoverer. It is not nearly so powerful as insulin in the crystalline form, first prepared by Dr. John J. Abel of the Johns Hopkins University, but its effects are indistinguishable from those of the natural drug produced from the pancreatic gland. Injected into the blood stream of laboratory animals afflicted with diabetes, it quickly reduces the blood sugar concentration to normal, and an overdose produces the convulsions that are a symptom of excessive insulin. These convulsions can be cured by injecting sugar solution, as they are in the case of natural insulin.

Dr. Frank of the University of Breslau states that the new chemical will be used chiefly in the treatment of mild or moderately severe cases and he cautions all prospective users to be exceedingly careful in regulating the size of the dose. Against the more advanced disease, the drug has no effect. But in spite of that, the new drug can be administered as an auxiliary medicament, for by swallowing properly adjusted doses of it the patient can cut the number of insulin injections needed daily from three down to one.

The new drug has not as yet been placed on the market, since it is yet in the experimental stage, but will no doubt be placed before the doctors and pharmacists as soon as its worth has been definitely established.

The Practical Druggist, May, 1927.

SNAKE BITE SERUM

The production of anti-snake bite serum is rapidly becoming commercialized and promises to be a God-send to those pioneers entering new and fertile regions of the tropics and southwestern United States. It is estimated that in Texas alone an annual loss of one million dollars is suffered by live stock dealers in animals who die from snake bites, and since the number of people bitten yearly increases at an alarming rate, a serum is needed as soon as possible.

The organization of the Antivenin Institute of America came about through the activity of Dr. Afranio do Amaral, who has established his laboratory in the H. K. Mulford Biological laboratories because of the excellent geographical location and adequate facilities for the technical work in the production of the serum.

At the present time the snake collection of the New York Zoological Society and that of the Philadelphia Zoological Garden constitute the source of supply of venom, but tropical and sub-tropical stations are rapidly being established in order to procure different venoms for specific serums.

The serum will no doubt be placed on the market shortly and will, without doubt be welcomed by hikers, tourists and those people going into snake infested districts.

THE MANUFACTURE OF RAYON OR CELLULOSE SILK

Rayon, formerly called artificial silk, is a soft, pliable, multifilament textile fiber produced from some form of plant cellulose such as cotton or wood pulp. In the manufacturing process the cellulose is dissolved to a viscous solution and forced through minute apertures corresponding to the spinnerets of the silk worm. The fine threads or filaments coming through these apertures are coagulated either in a fixing bath, or by a process of evaporation, in several of them formed simultaneously, are twisted into the strands or yarn for spinning.

Real silk consists of a core of so-called fibroid covered with a shell of sericin, or silk albumen. Both of these compounds contain nitrogen. Rayon, on the other hand is simply fine threads of cellulose or a cellulose ester. Its peculiar physical appearance is due to the solution processes which alter the normal appearance of the cellulose by what is termed "Hydration".

Four types of Rayon are now being manufactured on a commercial scale. The methods differ chiefly in the chemical solvents used. The products were formerly differentiated as Chardonnet, Cuprammonium, Viscose, and Acetate silks. The Chardonnet process is the oldest; the viscose is the most important commercially. All four processes are used in the United States.

In the Chardonnet process cotton cellulose is converted into a nitro-cellulose by treatment with nitric and sulfuric acids. The nitro-cellulose is dissolved in an alcohol-ether mixture, and the threads are formed by forcing the solution through the spinnerets into a coagulating bath of water.

The Cuprammonium or Despeissis process also starts with cotton, using as a solvent am-

moniacal copper oxide. The solution is forced through capillary tubes into a mixture of sulfuric acid and water.

In the Viscose process either cotton linters or wood pulp is ground up with caustic soda and then treated with carbon disulphide, making an "alkali cellulose-xanthate," which is soluble in water. A viscous water solution of this compound is converted into thread in the usual way, the cellulose being regenerated and coagulated in a formic acid bath.

Acetate or celanese silk is the latest type of rayon to be produced on the commercial scale. Unlike the other cellulose silks, acetate silk is an ester of cellulose. Cellulose acetate is prepared by treating wood pulp or cotton with acetic anhydride in the presence of a suitable catalyst, and precipitating and redissolving in a solvent such as chloroform, acetic acid, or acetone. The coagulating bath is either water, alcohol, or benzene.

The wood pulp used to make rayon is principally high grade bleached sulfite made from spruce. Pulp from balsam fir and tamarack has also been used. Whether the raw material is cotton linters or wood pulp, it must be free from vegetable greases, coloring matters, and similar impurities, and in all processes a preliminary alkali cleansing treatment is necessary which also, in the case of wood pulp, assures the presence of the stable or alpha-cellulose which is necessary for the production of rayon.

The production of rayon has leaped to the front with giant strides and promises to become a very important industry in those localities where materials can be procured cheaply.

Expressed Oil

"Lay down, pup; lay down;" ordered the man. "Good dog—lay down, I say."

"You'll have to say 'Lie down,' mister," declared a small bystander; "that's a Boston Terrier."

First Flea—"Where will you send little Gerald when he grows up?"

Second Flea—"I suppose he will go to the dogs like his father."

Astrologas Gumifera thinks that the reason some three year students suddenly decide two weeks before graduation, to take a four year

course, is not wholly due to a desire for further knowledge.

Teacher—"Take four out of five and what do you have, Tommy?"

Tommy—"Pyorrhæa, Ma'am."

Math Professor—"How long is a foot?"

Wag—"Whose foot?"

English Teacher—"Who can make a sentence using the word 'gruesome'?"

Freshman—"The man stopped shaving and 'gruesome' whiskers."

English Student—"Any fool can read a poem."

Law Student—"Yes, but it takes a genius to park a car."

He—"What do you say to a tramp on the deck?"

She—"I never speak to them."

Teacher—"Don't you know better than to write on both sides of the paper?"

Freshman—"But this is fiction."

Teacher—"Well, what of it?"

Freshman—"Well, you know there are always two sides to every story."

Bo—"You remind me of an aeroplane."

Zo—"How come?"

Bo—"You're no use at a'l on earth."

Father—"Billy, why are you feeding the dog yeast?"

Bill—"It swallowed a dime and I'm trying to raise the dough."

"We better move our spinal cord over," said the professor as he erased one figure and began drawing another.

Bub claims that the best thing the woman does in Pharmacy is break the law. She gets the certificate, marries a man without one and he runs the store. She does the housekeeping.

First Avis—"Great Scot, isn't that the same couple that's been under this tree every night this week?"

Second Avis—"Nope, but it's the same girl."

Small Boy to Pharmacist—"Five cents' worth of castor oil, please. And say, don't give me too much, 'cos it's me wot's got to take it."

First Woman—"I hear that Helen Smith isn't such a very nice girl."

Second Gossip—"What can you expect; her mother was a chorus girl and her father was a druggist."

"You say you think your honeymoon is fading?"

"Yes, when my husband ties my shoes now, he ties them so that they stay tied."

Doctor—"Your case is a serious one, sir, and I think a consultation had better be held."

Patient, very sick—"Very well, doctor, have as many accomplices as you like."

Dick Koch, to pretty girl on boat—"Pardon me, but is this seat next to you engaged?"

Pretty Girl—"No, but I am, and he's on the boat."

Paul Steidl is at present engaged in writing a book entitled "Sex Appeal" or "Why I Am So Popular With Women."

"There's a new one on me," said the dog as he scratched his head.

Thursday was Friday in Biology last week. They were dissecting fish.

"What's the difference between a Scotchman and a cocoanut."

"Well—go ahead."

"You can get a drink from a cocoanut."

Don't go to sleep in the barber's chair. For further details see Joe Pischeri.

Last week it was thought that a Civet cat had taken up its abode in the Pharmacognosy lecture room. Upon further investigation it was found that Professor Hosler had recently returned from the barber shop—his tonsorial ravages reeking with a heavenly odor.

Everyday Occurrences:

Any student doing K. P. duty for over cuts in Assembly.

Joe Pischeri going to class with his hat on.

Paul Steidl lecturing to a class of freshmen.

Puzzle:

Who owns the hand that guides us through lectures?

Who tells the freshman what to do and what not to do?

Who has said "As long as you've been in school?"

Who is it that enjoys the fresh air of "The Wide-Open Spaces" in the class room.

On looking over the 1912 catalogue of Pharmacy School we find this quotation, "Plans are now under way for a new Pharmacy School." We wonder what happened to these plans?

A lady was presented with a parrot by a sea-faring brother, who, sorry to say, had not troubled himself about the bird's vocabulary, so that said bird had quite a broad range of profanity. The lady endured it during the week but always put a cover over the cage on Sunday. One Monday afternoon she observed the preacher coming and she hastily put the cover over the bird's cage, but, unfortunately, the bird was not to be stilled; and, as the worthy Dominie entered the room, burst out with, "This has been a damn short week."

Professor Brown (at the telephone)—"What's that? You can't spell my name? Certainly, I'll spell it. B for Bronsotaurus, R for Rhizophoraceae, O for Ophisthotelae, W. for Willugbaeya, and N for Nucifraga."

He—"Do you want to marry a one-eyed man?"

She—"No, why?"

He—"Then let me carry the umbrella."

Sweet young thing—"Why are you running that roller thing over that field?"

Farmer—"I'm going to raise mashed potatoes this year."

George—"I had an awful fright at the Circle last night."

Paul—"Yes, I know it. I saw you with her."

Elmer—"Did you sound the family about our marriage?"

She—"Yes, and father sounded the worst."



Pharm

The Resonant Pharmacodon

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J.J. STARK

"Hold on, it's tough riding, Big Boy!"

The Reserve Pharmakon

A Publication Dedicated to Professional Pharmacy

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

A Few Unfinished Problems in Chemistry

By Dr. H. P. Lankelma, Assistant Professor in Chemistry.

There are in the field of Chemistry a large number of problems which have in an important measure been solved. On the other hand there remain many on which the progress has not been so satisfactory. Much has recently been written in a non-technical way upon subjects in the former class especially in the field of applied chemistry.

The story of the development of such materials as ethyl gasoline, nitrocellulose lacquers, synthetic methanol, insulin, etc., are familiar examples. Subjects in the latter class have not been so widely discussed. The emphasis here is naturally upon what remains to be done rather than upon accomplishment in the past. A few of the more familiar materials in the field of organic chemistry will serve as illustrations of some unfinished problems.

Before taking up a discussion of any individual problems it is necessary to point out what the investigator attempts to do in studying the chemistry of an organic compound (compound of carbon). He must first obtain it in pure form, that is, free from other materials. A sharp melting point or a constant boiling point are the most commonly used criteria of purity. These may be supplemented by other physical constants. An analysis must then be made to find what elements are present in the molecule. This must be followed by a quantitative analysis to determine the relative number of the atoms in the molecule.

A molecular weight determination must also be made which gives in connection with other data, the exact number of each of the atoms present. Finally he must know how the atoms are arranged in relation to each other within the molecule. For example there are six different substances which by analysis and molecular weight determination give the formula $C_4H_{10}O$. Their existence can only be interpreted by experimental work leading to a determination of the position in relation to each other of each of these atoms. The expression of this relation is called structure. The structure of an organic compound may be determined in two ways.

First, by breaking it down into simpler units whose structure is known and deducing from the nature of these and the reactions employed, how they must have been united in the larger molecule. As a step which follows the breaking down, a building up from simpler units is then attempted as a verification of the structure deduced by decomposition, or as is often the case to establish a structure to which the decomposition gives a clue but not a final proof.

It is true that after the structure of an organic compound has been established there still remains a great deal to be learned about it. However this is in a large measure due to the inadequacy of our present theories of valence. Determination of physical constants, chemical structure as we now know it and a study of the method of preparation and reactions of a given compound in the light of this structure is as far as chemists can go at present. As examples of familiar organic materials upon which a great deal of work remains to be done are petroleum, proteins, carbohydrates, alkaloids and synthetic drugs.

Petroleum consists chiefly of a very complex mixture of hydrocarbons, that is, compounds containing only carbon and hydrogen. From it fuel gas, gasoline, kerosene, lubricating oils, vaseline, paraffin and asphalt are separated. These so-called fractions are still mixtures each containing many different hydrocarbons. Much progress has recently been made in the methods for obtaining these fractions and in removing undesirable impurities from them.

Demand for gasoline has led to the development of the "cracking" process for converting heavier oils into gasoline. This has enormously increased the gasoline yield of petroleum. Recently the gases formed in this cracking process have been utilized for the synthesis of alcohols, ethers, and esters, materials especially valuable as solvent in the lacquer industry.

Two general problems of importance in this field are further work on the relation between

chemical constitution and the nature of combustion of fuel in gasoline engine and the use of hydrocarbon constituents of petroleum as a starting point for the synthesis of useful organic compounds. The difficulties here are the separation of petroleum into pure constituents and the inertia of many of the hydrocarbon constituents to chemical reagents.

In studying the proteins the first difficulty encountered is that they decompose before melting or vaporizing, hence the chemist has no assurance in any case that he is working with a chemical individual. Since they form colloidal solutions, molecular weight determinations are abnormally high. Chemical methods have been applied to determine the molecular weight of some proteins. For example, haemoglobin, calculating from the per cent by weight of iron which it contains, gives $(14000)_n$ where n is some whole number. This requires a large number of atoms per molecule which point to very complex structure. Though differing widely in many chemical and physical properties the proteins are remarkably similar in composition. Most of them are composed of only a half dozen elements (C, H, N, O, S and P) and the relative proportion by weight of these varies within narrow limits. Some insight into the structural relations within the protein molecule has been gained by a study of the simpler units obtained by their hydrolysis.

Amino acids of known structure have been shown to result from this hydrolysis in every case. Certain proteins on hydrolysis give only amino acids while others give in addition other units such as carbohydrates and phosphoric acid. On the synthetic side, compounds intermediate between amino acids and proteins have been built up but this is still a long ways from the goal.

We do know then that proteins are compounds of very high molecular weight and that they are built up of residues of different amino acids with each other, and in the case of the complex proteins, also with other groups.

On the other hand we do not know when we are dealing with a pure protein, nor how many residues of amino acid are present in a given protein molecule, nor the exact plan by which they are linked together with each other or other units which may be present.

Since protein material is an essential constituent of plant and animal cells, and changes in these, both normal and pathological, must involve chemical change of this material further knowledge of the chemistry of the proteins is indispensable to a more fundamental understanding of the causes and treatment of disease as well as an understanding of the normal processes of life.

In the field of carbohydrates the constitution of many of the simpler members has been quite definitely established, eg., glucose, sucroses, maltose, and lactose. However, among the more complex members such as starch and cellulose the difficulties are of a similar nature to those encountered in protein study. Hydrolysis shows these two materials to be composed of units of glucose but the number of these units present in the molecule and the plan of this linkage is still unestablished.

Further knowledge of the chemical nature of these two substances is necessary to a clearer understanding of the many problems of plant physiology, nutrition, and industrial uses.

The alkaloids, because of their crystalline nature and basic properties, are more amenable to study than many other natural products. Many of them melt without decomposition and the nature of their solutions makes molecular weight determinations possible. Hence chemists have succeeded in proving the structure of many important alkaloids. For example atropine, cocaine and caffeine.

Though the synthesis of none of these is yet practicable as a source for them, a knowledge of their structure has been very useful. For example it has led to a study of a large number of analogous compounds with the development of a large number of useful synthetics for similar uses. For example homatropine and a large number of useful cocaine substitutes for local anaesthesia.

On the other hand the exact structure of many alkaloids remains to be determined. Quinine is known to be a derivative of the simpler compound quinoline, of formula $C_{20}H_{24}O_2N_2$. The exact constitution of one of the groups attached to the quinoline molecule is not yet known. In cinchonine which is chemically very similar to quinine this same group, of unestablished structure appears to be attached to the quinoline molecule. Struc-

tures have been proposed which interpret quite satisfactorily the chemical properties of these two alkaloids but they have not been strictly proven. The strychnine molecule is of a more complex nature. From a study of its decomposition products when treated with various reagents certain facts are known concerning the possible units in the molecule. This knowledge is quite fragmentary and experimental evidence pointing to a definite structure is still lacking.

Morphine by analysis and molecular weight determinations shows a formula $C_{17}H_{19}O_3N$. A study of its decomposition products shows it to be a derivative of the hydrocarbon phenanthrene. The nature as well as the position of certain of the groups attached to this hydrocarbon molecule have been determined but others still remain obscure. Hence its exact structure is not yet known. The synthesis of morphine from simpler materials has not yet been accomplished. A practicable synthesis of morphine would go a long way to help stamp out the illicit traffic in opium. Codeine is a simple derivative of morphine often prepared from it. A knowledge of its structure of course depends upon the establishment of that of morphine.

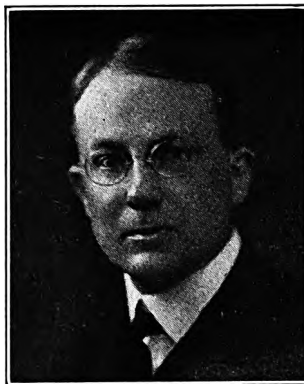
Emetine, physostigmine, aconitine and the ergot alkaloids represent examples of alkaloids whose chemical structure is still very obscure. A more definite knowledge of the structure of the alkaloids is invaluable as an aid to their preparation from other sources than the natural, in preparing more desirable analogues, and in the solution of problems in the field of plant physiology.

Since Kekule proposed his theory of the linking of C atoms to form chains and his hexagon formula for the structure of benzene (1858 and 1865), both indispensable to an interpretation of chemical relations of organic compounds, much work has been done on the synthesis of drugs. The classical researches of Ehrlich on the development of arsphenamine and neoarsphenamine may be mentioned as examples of this. A few other well known synthetic drugs include such materials as barbital, antipyrine, salicylic acid and its derivatives, homatropine, novocaine, hexyl resorcin (caprokol), and mercurochrome as examples.

Numerous studies have been made on the physiological action of drugs of known struc-

ture and relation between chemical constitution and physiological action of these. Many theories have been advanced to interpret the results obtained. A study of these shows that though useful they are quite narrow in scope and provisional rather than fundamental in their nature. Adequate theories for interpreting this relation obviously require knowledge of the exact chemical changes which the drug causes in exerting its action. The incompleteness of our knowledge of the chemistry of the protein material stands in our way at this point. Further work is of course necessary on the development of new synthetic materials for therapeutic use.

It is apparent even from a consideration of a few examples that although an enormous amount of work has been done in the field of chemistry with a corresponding amount of progress as a result, much yet remains to be done. Also from the nature of the problems which remain to be solved it is evident that the great triumphs of chemistry do not all lie in the past.



THE NEW PRESIDENT OF THE AMERICAN ASSOCIATION OF COL- LEGES OF PHARMACY

When one recalls the fact that pharmaceutical education in America was not recognized two generations ago as properly belonging in the University field, its present development therein seems quite remarkable. Beginning with the establishment of a pharmacy college as an independent department of the University of Michigan in 1876 under the deanship of Dr. A. B. Prescott, who was internationally known as an analytical and pharmaceutical chemist, the idea had gained

such impetus and spread to so many universities by 1900 that an organization headed by Dr. Prescott and known as the American Conference of Pharmaceutical Faculties was founded. Later the name was changed to the American Association of Colleges of Pharmacy.

Until the birth of this organization pharmaceutical education was not a vital force in the uplifting of the profession; since its birth, trade school methods of technical training have been replaced by sound professional educational methods, backed by a wider liberal education. Succeeding presidents of the organization have always been the leaders of their day in pharmaceutical education. Such able men as Remington, Rusby, Beal, Schlotterbeck and Arny have directed its efforts and furthered its ideals for the betterment of our profession. An account of its accomplishments would entail a brief history of American pharmacy during the last quarter century.

In view of this it is with no little pride that we record the election of our own Dean Spease to the presidency of the American Association of Colleges of Pharmacy which held its 28th annual meeting in St. Louis on August 22nd and 23rd just prior to the Diamond anniversary meeting of the American Pharmaceutical Association. Because of the fact that the association, including 50 odd colleges, went on record as favoring a standard four year course in all schools of pharmacy, and with the many other problems facing the association at this time, we see plenty of activity for the Dean. We have perfect confidence, however, that his untiring energy will encompass the accomplishments of his predecessors in office and redound to the prestige of our school.

The other officers of the association for the ensuing year are as follows:

Vice Pres., H. M. Faser, Dean of School of Pharmacy, Univ. of Miss.;

Secy.-Treas., Prof. Zada M. Cooper, College of Pharmacy, Univ. of Iowa;

Chairman, Executive Committee, C. B. Jordan, Dean, School of Pharmacy, Purdue Univ.

Other members of the Executive Committee: W. F. Rudd, Dean, Pharmacy Department of Medical College of Va.; E. H. Kraus,

Dean, College of Pharmacy, Univ. of Michigan; E. V. Howell, Dean, School of Pharmacy, Univ. of North Carolina; C. H. Lawall, Dean, Philadelphia College of Pharmacy.

PHARMACY SCHOOL CO-OPERATING IN THE UNIVERSITY HEALTH SERVICE

Western Reserve University has established a health service for the benefit of its students. For a nominal fee of five dollars, paid at the time of registration in the Fall, every student is entitled to a physical examination and consultation services from time to time as occasion may require.

Dr. L. H. Ferguson is in charge of the service assisted by Dr. A. B. Dennison. The offices are temporarily located in a house opposite the Allen Memorial Medical Library on Euclid Ave., the house being one of several residences taken over by the University in anticipation of an extended building program.

The Pharmacy School was called upon to co-operate in the work of the health service and has fitted out space on the second floor, formerly occupied by the chemical stock and balance rooms, into dispensing and waiting rooms, respectively.

This allotment of space was made possible by the recent removal of all our chemistry work to the general chemical laboratory of the University.

All prescriptions issued by the health service will be filled at stated periods every day the University is officially in session by the fully registered pharmacists of our faculty. Nominal charges, only, will be made to cover the actual cost of materials used.

BUREAU OF PROHIBITION REGULATIONS NO. 2

The recent act of Congress whereby a Bureau of Prohibition was created made it necessary to codify the old Internal Revenue Regulations No. 60 with such amendments and modifications as the new act created.

Regulations No. 2 of the Bureau of Prohibition became effective Oct. 1, 1927, and a copy of same should be in the hands of every pharmacist. Among some of the more outstanding changes to be noted in the new regulations are the following:

1. All permits which are not annually renewable under the old regulations must be renewed each year after December 31, 1928. Among these are the so-called "H" permits to use liquors which are held by numerous manufacturers. Applications for the renewal of such permits should be filed on or after July 1st and not later than August 31, 1928.

2. Permittees will no longer be restricted to withdrawals of liquor on a quarterly basis but will be permitted to possess not more than 50 per cent of their annual allowance at any one time.

3. A safe and secure place of storage must be provided for all liquors possessed or authorized to be possessed on the permittee's premises.

4. With regard to prescriptions for liquor for medicinal purposes it has been provided that prescriptions must be filled within three days after issuance, unless the physician extends the time for not exceeding an additional three days. There is also a requirement that compounded prescriptions in which potable distilled spirits (not alcohol) are used may not be written or filled for a gross quantity in excess of six fluid ounces.

5. Provisions will appear in the new forms of application for permits containing stipulations and conditions for the inspection of permittee's premises and records, designation and approval of managers of the permittee's business, termination of permits in the event of change in the ownership or management, description of storage place, revocation of permit for violation of the prohibition laws or regulations by the permittee or other person employed by him in the exercise of the permit privileges, et cetera.

of the General Code; to enact new Sections 12705-1, 12707-1, 12707-2, for the purpose of redefining a drug store and to provide for licensing same.

Section 1. That Section 12705 and 12707 of the General Code be amended and Supplemental Section 12705-1, 12707-1 and 12707-2 be enacted to read as follows:

Section 12705. Whoever, not being a legally registered pharmacist, manages or conducts a retail drug store unless he has in his employ in full and actual charge of and physically present in such store a pharmacist legally registered under the laws of this state, and whoever being a legally registered pharmacist shall manage or conduct a retail drug store without being personally in full and actual charge of the pharmaceutical department of such store, or unless he has in his employ in full and actual charge of and physically present in such store a pharmacist legally registered under the laws of this state, shall be fined not less than fifty dollars nor more than two hundred dollars. Each violation of this section shall constitute a separate offense. A retail drug store or pharmacy, within the meaning of this section shall be any room, rooms or place of business wherein or from which drugs, poisons, chemicals, medicines or pharmaceutical preparations shall be dispensed, sold, delivered, advertised, offered or displayed for sale at retail as herein provided or upon which or in which the advertising, listing, or classification of or as assign any pharmaceutical insignia or the words "pharmacy", "drugs", "drugstore", "pharmacist", "drug-gist", "pharmaceutical chemist", "apothecary", "medicines" or any of these words or their equivalent in this or any language, are or is displayed.

Section 12705-1. On and after July 1, 1929, any person, firm, partnership or corporation desiring to practice pharmacy or conduct a retail drugstore, as defined in Section 12705 of the General Code, must first make application to the State Board of Pharmacy for a license so to do. The cost of such license shall be \$1.00 and shall be designated as a "Pharmacy License". A separate license must be secured for each store or place of business. Each application for a "Pharmacy License" shall be upon such form, and in such manner, and furnish

PROPOSED CHANGES IN THE OHIO PHARMACY STATUTE

At the last meeting of the Ohio State Pharmaceutical Association, held at Cedar Point in July, the following changes and amendments to the present pharmacy law were approved.

The words printed in heavy type are the changes to be made in the wording of the statutes as it stand at present, provided the General Assembly can be made to see the light at its next regular meeting:

A bill to amend Sections 12705 and 12707

such information as the State Board of Pharmacy shall require. Whenever the applicant for a "Pharmacy License" is not a registered pharmacist legally registered under the laws of this state, the application thereof shall be jointly made by the owner and the registered pharmacist to be in charge and they shall jointly certify that when open for business the retail drug store or pharmacy shall at all times be under the personal management of the registered pharmacist at all times physically present, or under the personal management of some other registered pharmacist who is employed and physically present. A "Pharmacy License" shall be issued for one year dating from July 1, 1929, or from any subsequent date to July 1, of the following year, and may be renewed by the State Board of Pharmacy have been satisfied \$1.00 for renewal is paid and the conditions for renewal as laid down by the State Board of Pharmacy have been satisfied.

Section 12707-1. The State Board of Pharmacy is hereby empowered to make rules and regulations concerning the registration of any pharmacist, the licensing of any pharmacy or drug store, or the issuance, suspension or revocation of a pharmacist's certificate, a "Pharmacy License", or with reference to the conduct of such registered pharmacist and the manner in which any such pharmacy, drug store or other place of business operating under a "Pharmacy License" is conducted. Any "Pharmacy License" may be suspended or revoked by the State Board of Pharmacy after due notice and hearing as provided for certificates in Sections 1307, 1307-1 and 1307-2 of the General Code, and any act involving moral turpitude or violation of statute law or rules and regulations concerning a pharmacist's certificate, a "Pharmacy License", or unprofessional conduct in the cast of a pharmacist, shall be sufficient cause for such suspension or revocation.

Section 12707-2. Any violation of Sections 12705, 12705-1 and 12707-1 shall be punished as provided for in Section 12706 of the General Code.

EDITORIAL NOTE

The PHARMACON invites criticism of the

above. Arguments for or against such legislation will be published in future issues. We would like to hear, especially, from the alumni on this matter of no little importance to the pharmacists of our state.

STATE PHARMACY BOARDS AND COLLEGE CO-OPERATION

The National Association of Boards of Pharmacy at its meeting in St. Louis this year came to the conclusion after considerable discussion that no good could come from the publication of board examination questions, holding that the possession of the questions worked to the disadvantage of the candidate, in that he would spend a great deal of time in studying them that might be put to better advantage in some other way. It therefore decided that in the future publicity of questions should be limited to exchange between boards and colleges, if such exchange is desired by these bodies, but that hereafter board questions should not be given out for publication in the drug journals.

Reciprocity between all the State Pharmacy Boards of the nation, including the District of Columbia, is now nearly complete. New York and California are now the only exceptions.

At the recent annual meeting of the American Medical Association that organization decided to have a bill introduced at the next session of Congress which will amend the Federal Food and Drugs act so as to apply to cosmetics, particularly with reference to provisions against misbranding and adulteration.

Michigan, Pennsylvania, Illinois, New York and Rhode Island now have laws in force restricting the ownership of pharmacies. When will Ohio Pharmacists awaken to the fact that this is an essential step to the fortifying of their professional status?

SCHOLARSHIPS AWARDED

Albert E. Knauf adds another brilliant to his crown by carrying off a scholarship last year. Incidentally this is A. E. K.'s third time to repeat that performance. Congratulations to you, A. Ensign K., we think you deserve it.

Stepping right along is Lawrence Baldinger with a continuation of his scholarship awarded last year. We wouldn't be a bit surprised if

he captured one next year as a senior.

A newcomer into the Scholarship ranks this year is Edward Paley. He was awarded the Freshman Scholarship for the year 1927-28.

RETAIL PHARMACY COURSE

A new course has been added to the Pharmacy Curriculum this semester. It is listed as Pharmacy 120, and is offered as an elective to those of the Junior and Senior classes who intend to follow Retail Drug Store work. It has been developed in order to satisfy the demand for a workable knowledge of drug sundries, surgical, hospital and sick-room supplies. Special foods for infants, diabetics and invalids, recognized proprietary medicines used in prescription work and biological products are also studied in detail. Part of the course embraces a study of retail buying and selling, discounts, and divers branches of bookkeeping, store management and other business problems. The course is under the guidance of Mr. Hosler and is given twice a week. In addition to the regular lectures, there is ample demonstration of samples applicable to the course.

Social News

A PHARMACY SCHOOL SMOKER

Is it not true that there are not enough social gatherings in the School of Pharmacy to promote a most friendly feeling among the students and to keep them interested in the activities of the school? A condition has been existing in the school which is no benefit to the students nor to the welfare of the school. Perhaps there are several reasons for such a condition. Many of the students work all of their spare time and as a result they feel that they cannot give any more time to the school than is absolutely required by their courses and as a result they do not have the opportunity to intermingle with their fellow students and become better acquainted with them. Because of this they are only able to see the bad side of things and seem only able to pick out the bad features of their fellow-men. This does not promote a genial feeling and naturally it is not very good advertising for the school.

The reason that there are not more gath-

erings of the students is perhaps due to the fact that no one or no group seems to take it upon himself to promote things. The actives and pledges of Kappa Psi Fraternity are planning to start such a movement for a better feeling in the school. On October 21st, the Pledgemen of Kappa Psi are opening their house to the men of the School of Pharmacy. They are planning a big Smoker to which every man in the school is cordially invited.

There will be cards for those who desire to play, there will be music for all and along with this there will be some form of amusement which will be enjoyed by all.

This invitation is extended to the professors as well because we know that they will find a certain enjoyment in being with their students at a social gathering as well as being with them in classes.

PHI DELTA CHI NEWS

Twelve actives of Phi Delta Chi returned to school this fall. All of the 12 remained at the house the summer. Brothers Cooke, Shane, and Koch, all worked at different Marshall's Stores this summer. Brother Baldinger remained to keep his position at The Cleveland Press in the Classified Advertising Department.

Brothers George W. Brown and Elmer Hudson, who graduated in June, are now working in their respective home towns, Youngstown and Louisville.

Brother Thompson, of Xi Chapter, is now living at the house. Brother Thompson graduated from Ohio State in 1916, just a short time before Dean Spease left Columbus. He went to school with a good many fellows who are now sending their proteges to Western Reserve to get a good training in Pharmacy, which of course shows what the pharmacists of Ohio think of our Dean.

Thompson is now working at The Standard Drug Co., Ninth and Superior, and expects to remain in Cleveland for some time.

Well, he finally did it. Yes, our Brother Wargell, known as the "King", the "Baron", or "Walt", took unto himself a wife. It all happened so quickly and so smoothly that it was really hard to believe that he had really

made the plunge. We all wish Walt and his wife as happy a married life as could be wished and hope that their joys will be many and their sorrows few. We almost forgot to mention the young lady's name, but really it wasn't intentional. Miss Marie Patronskey, or just plain "Marie" as we would call her was the lady of our Brother's. As is stated some place else in this issue, she once played the part of a make believe bride with Walter in high school, but there was no make believe to the ceremony last June. Again we wish you all the happiness possible.

Professor???? Paul Steidl, our Tire City assistant pharmacist is back this year, bragging about Akron, et cetera, much to his own enjoyment. The Professor has not finished his latest book on Pharmacy but expects to do so as soon as he finishes the one he is now on, "Why and How to Run an Ethical Drug Store, My Personal Experiences."

KAPPA PSI NEWS

On the opening night of school the actives and alumni of Kappa Psi, together with a goodly number of the new men enjoyed a very pleasant evening. A large number of the alumni, living in the city, came to the house after their stores were closed. Such a gathering gives an opportunity for the older men to become acquainted with the new men and for the Freshmen to become acquainted with one another before their regular classes start. We were very glad to meet so many of the faculty members present and we all feel certain that everyone had a most enjoyable evening.

Brother Koci, who graduated last June, is no longer working at the Physician's and Surgeon's Pharmacy. He is now with the Standard Drug Company.

Brother Novatny of Chi Chapter spent the summer months at the Fraternity house. He is a representative of the Metz Laboratories.

Beta-Beta Chapter was represented at the American Legion Convention in Paris. Brother Brooks of Lake County Memorial Hospital of Painesville, Ohio, was the fortunate one. We are all eagerly awaiting his return that we may hear of his experiences.

Brother Heter, '27, is now working in the Rexall Drug Store in Ohio.

Brothers Guess, Jewell, and Cullinan of Warren, Ohio, were visitors at the Fraternity house on October eleventh.

Brother Walters, who is working at the Physician's and Surgeon's Pharmacy has been living at the Fraternity house for the past few months.

ALPHA ZETA OMEGA NEWS

Alpha Zeta Omega was right in line with the rest in pledging activities and to date have eight men added to their pledge list.

Albert Fine	Junior
Max Reimer	Junior
L. Gross	Sophomore
J. Greenblatt	Freshman
Joe Dworkin	Freshman
B. Weinstein	Freshman

The annual pledge dance will be held at the Park Lane Villa on October 28th.

The Alpha Zeta Omega rooms are at the University Apartments on East 107th St. off Euclid Ave. New officers for this school year were recently elected and installed.

Roy Scott	President
Milford Berger	Secretary
Morris Schoenberg	Treasurer

PHI KAPPA OMICRON NEWS

Phi Kappa Omicron recently elected and installed new officers for the coming year.

President	Mildred Pirson
Vice President	Mary Kondash
Secretary	Gertrude Horsch
Treasurer	Ruth Pirson
Sergeant-at-Arms	Emma Pejsa
Vice Sergeant-at-Arms	Irene Boris
Chaplain	Lucille Bickford
Historian	Antoinette Szczytkowski



Sports



SOPH-FROSH HOLD ANNUAL AFFAIR

Thursday afternoon, September 29th, was declared a holiday at the Pharmacy School.

At the invitation of the Sophomores, and at the expense of the yearlings, the entire student body attended a theatre party at Loew's State. The only ceremony performed by the Sophs was a pill-gargling contest. It provided a little enjoyment for the upper-classmen and possibly a little bit of uneasiness for the Frosh.

After the first five acts were completed the fun began. A stout gentleman called five of our finest Freshmen upon the stage. It is needless to say that this special act provided the most enjoyment derived from the show. Each of the Frosh entertained the audience. They danced, sang, and conducted the orchestra.

It might be mentioned that Mr. Dawson proved himself to be one of the finest Hula-Hula dancers in this vicinity. His act was a Gilda Gray south sea island special.

The affair was a success and was well planned and well executed. The Committee was composed of Alvin H. Kutler, Melvern Aldrich, Wills H. Clinton, and Myer Karner.

CHECKER TOURNNEY SOON TO BE UNDER WAY

The Second Annual Checker Tournament will start November 1st. The tournament is a strictly Pharmacy School affair and is held to determine the best checker player in the school. The games will all be played according to tournament rules. Only five minutes are allowed for each move, the touch-move system is employed, and two victories in three games are required to win a series.

Last year Joseph Koci, who is now an alumnus, established himself as the first official checker champion of the School of Pharmacy. The competition was limited to a half dozen men. The games were all hotly-contested and competition was keen.

This year, however, we expect to have more people in the tournament. An elimination series system similar to the one employed in intramural sports will be used. The Freshman and new students are all asked to enter the field of competition. A trophy will be awarded to the winner.

The tournament will again be supervised by Myer Karner. All those desiring to enter will kindly notify him before November 1st, so that a schedule may be drawn up.

Editorials

EDITORIALS

We have just witnessed the passing of "Pharmacy Week." Its purpose as is quite generally known was to stimulate the mind of the Public pharmaceutically. In short, the Druggists of the country wish the Public to consider for a space of seven days, those pharmacies which are operating after the much abused ethical manner, as opposed to those places of business which are running rampant in commercialism.

In reality, the individual druggist is asking the Public to weigh his method of health service against that of the Chain Store. It is in the nature of an appeal, for, it seems, that the Public has left its first love and has gone astraying after other Gods. But what concerns us most is why the Public has turned thus fickle, toward those who are supposed to answer the night-bell and perform all manner of self-abnegating acts in behalf of them, the Public. The truth of the matter is, that the Public goes where it is best served.

The Public likes its stores neat, clean, attractive and above all, well lighted. There are individual Druggists who will complain of Chain Methods yet will not see the wisdom of lighted show cases and 500-watt bulbs. The Public likes fresh goods, in fact the time has arrived when it will not accept otherwise, even for sentimental reasons. Incidentally, the Public watches prices.

The individual druggist chants the old madrigal that he can't meet the Chain Store prices and anyway he isn't running that kind of a drug store. He is running an ethical store which to him means a store devoted to filling prescriptions. His ever present chimera that all people who enter a Chain Store do so only to purchase cut-priced articles and that these same people reserve their prescriptions for him, is as ludicrous as his thinking.

The Public may follow strong after the prophecies of Barnum but at that it is still a shrewd Public and the individual druggist is admitting as much. He has appointed a week in which to ask this same Public to come across the street from the chain-store and have a look at his windows. He has them artfully arranged with what he is pleased to call

Pharmaceutical necessities—crude drugs—apparatus and divers other paraphernalia. The Public is mildly interested and possibly intrigued, but by no means is it converted.

That the individual Druggist thinks that new customers will ensue or that old ones will return to the fold is but another example of his esoteric thinking and next week he will continue to complain of the Chain-Stores and their methods. His idea that the puerile display of crude drugs and apparatus will stimulate the mind of the Public into sensing their analogy to prescriptions and thereby bring him some of the latter is but more evidence of his poor business approach to the Public.

In addition he does not see, that the Chain Store is now applying methods to secure his prescription business. As it took away his sundries business or rather introduced sundries into its own business and mulcted away the bulk of his "general" business, so is it now preparing by just such efficient methods to obtain his prescription livelihood. Will the individual Druggist rise up to this occasion! Will he successfully combat such a move? Not if he relies upon such methods as were distributed abroad within the past week. Let him first be honest with himself and cognizant of his true situation, first, relative to the Public and then to the Chain Store. Let him learn to be more efficient in his business, for it is bad manipulation of his own store that has started his grief. Let him attend his Drug meetings, his Pharmaceutical gatherings. Let him discuss his troubles with his fellow Professionals. Let him urge different laws and legislation. Finally let him forget his petty jealousies and devote himself to progression.

❁ Alumni News ❁

THE ALUMNI BANQUET

By W. W. Hosler, '22, Alumni Secretary

The Alumni Association held its Annual Banquet at the Hotel Statler on June 15, 1927, the night before Commencement. Tables were set for 131 members, faculty, graduates, and guests.

What a dinner! The chef was at his best,

and better chicken and the "trimmings" are seldom found. Everyone enjoyed the music, as we had Jack Horwitz and his Serenaders, formerly of the Far East. They furnished dinner music, which sounded fine after the guests had begun to eat, for before that everyone was using some kind of a noise maker, just to liven things up a bit.

The speeches were short and full of "pep". President George Miller, '22, acted as Toast-master and presented Dean Spease with a Sheaffer's Life-time pen desk set as a token of esteem, coming at the end of ten years of faithful service to the School, and to the druggists of the city.

Well chosen remarks were given by Mrs. John Krause, Treasurer of the Cleveland School of Pharmacy for a period of years before its affiliation with the University; A. L. Flandermeyer, our Cleveland member of the Board of Pharmacy; Eugene Selzer, '87, one of the city's foremost druggists; John Jarmuzewski, '10, President of the N. O. D. A.; and Emil Petersilge, '95, druggist and former trustee of the Old School.

The faculty turned out 100%. Former students were glad to greet former faculty members and to know the new ones. Among those present were the Dean and Mrs. Spease, Dr. and Mrs. Lankelma, Mr. and Mrs. Davy, Mr. and Mrs. Chamberlin, and Miss Allen. Since I should also be among this group, having deserted the drug store for the lecture table and laboratory, might also mention that Mr. and Mrs. Hosler were present.

Among the guests were Mr. and Mrs. Carl Winter, Mr. and Mrs. A. Riegelhaupt, and Dr. A. A. Albrecht, formerly an Instructor in Chemistry and now practicing medicine at 8314 Euclid Avenue.

The Seniors present were Elmer Hudson, William Hulme, Robert Stokhaus, Samuel Krenitz, Millard Berger, Milford Harris, and James Neely. The alumni regret that all were not present to enjoy the good time and receive the congratulations of the "old-timers".

The student body was represented by Charles Young, Roy Scott, Lawrence Baldinger, and Alfred Zarlengo. The entire student body assisted in distributing tickets, and their efforts were appreciated by the officers of the association. Active members of Kappi Psi, Phi Delta Chi and Alpha Zeta

Omega were of great assistance in "rounding-up" their alumni.

Earl Goudy, '13, and his wife drove up from Beach City, Ohio. While he was disappointed at not finding his old classmates, he was glad to make new friends. Said he had a good time, would be back next year, and wanted '13 to be out to meet him. Atta Boy, Earl, we'll have them out, if we have to drive them.

George Miller, '22, the President, Vice-President Paul Hudson, '23, and W. W. Hosler, '22, were re-elected. Miss Valentine Twarogowski, '17, was elected Treasurer to succeed W. F. Wargell, '24. Joe Silberblatt, '22, was elected to the Executive Committee, succeeding Yasha Venar, '26. The other members of the committee who continue in office are Tom Pratt, '12, A. A. Albrecht, '14, and Helen Davis, '17.

Several loyal alumni who were unable to attend sent their checks along anyway, and certainly deserve the thanks and praise of the association. Too bad they didn't get there, but we'll look for Henry Pollack, Stephen Demeter, H. H. Persky, Charles Bauer, Al Metzger, Walter Palenschat, O. L. Brooks, O. L. Stimmel and Benny Cieslowski next year.

The list of those present, and not previously mentioned, is as follows: A. A. Albrecht, '14; Mrs. Cunningham (Irene Albrecht), '17; Abe Amster, '23; Jack Baskind, '23; Harry Baskind, '20; Cy Brabenec, '21; F. J. Cermak, '03; David Chase, '23; Aaron Davidson, '21; Victor Germ, '23; Gail Geuss, '26; Fred Greiner, '26; Louis Gressel, '24; Sol Herwold, '22; Oscar Hornstein, '26; R. R. Hudson, '23; James Jewell, '25; Lad Jirasek, '26; Mr. and Mrs. C. V. Kobylanski, '17 and '20; Frank Lattin, '26; Phil Leiner, '23; L. P. Miller, '15; E. E. Pasco, '22; R. B. Plent, '22; William Reeb, '17; Nelson Scribner '22; George Sherlock, '24; Russell Stinson, '22; Tom Sords, '22; Frank Wise, '22; Al Walters, '23; Wade Wetzel '22; Anthony Zakrajsek, '22; William Zelmanovitz, '25; and J. G. Zverina, '21.



E. R. SELTZER CELEBRATES 40TH ANNIVERSARY AS A PHARMACIST

In 1881 Eugene R. Seltzer entered the store of Mr. E. A. Schellentrager as an apprentice. Two years later he attended the Cleveland School of Pharmacy, graduating in 1885. In 1887 he opened a Pharmacy at 41st and Superior. Later he became interested in Pharmaceutical activities. He was Trustee of the Cleveland School of Pharmacy for a number of years, president as well as treasurer for three years of Ohio State Pharmaceutical Association of the Northern Ohio Druggists Association.

Mr. Seltzer is a member of Masonic bodies, Cleveland Chamber of Commerce and a life member of the Acacia Country Club. He is now located at 10412 Euclid Ave.

F. WILLIAM STOCKHAUS

Mr. F. William Stockhaus started working as pharmacist in September, 1877 at M. L. Shay's drug store on Detroit Ave. This was before it was necessary to be registered by the State. He began work at the retail store of Strong, Cobb & Co. on Superior Ave. in April, 1886, and at same time attended Cleveland School of Pharmacy. He graduated from Cleveland School of Pharmacy in 1887 and passed the State Board examination that same year.

In February, 1916, he entered into partnership with Mr. E. R. Seltzer at the latter's store on the square. He remained there until Seltzer Drug Co. moved to E. 105th and Euclid. Since then he has done relief work at one or two West Side stores, serving in that

capacity now at Kodel's, W. 41st and Lorain.

His son Robert is now a demonstrator in Hospital Manufacturing at W. R. U. Pharmacy School. W. R. U. has cause to be proud both of Mr. Stockhaus and his genial son, Robert.

ALUMNI PERSONALS

Mr. H. E. Pierstorf who graduated from this school in 1903, and who has been operating a Pharmacy at 13504 Lorain Ave., opened a new store this summer at 22432 Lorain Ave.

Miss Carrie McDowell who received her B. S. degree in 1925, is the assistant pharmacist at this new store of Mr. Pierstorf's.

Robert Stockhaus, B. S. of 1927, is now Demonstrator in Pharmacy at this school.

Harry G. Baskind, Ph.G., '25, is back to school and will receive his B. S. degree in June. This summer, on August 23rd, he was married and is now living at 10101 Westchester Avenue.

This summer, Fred Greiner was married and also bought a store on Lorain Ave. That's quite enough for any man to do in one summer. Mr. Greiner received his Ph.G. degree in 1926.

Joseph Pischieri who was in school here last year is now studying Medicine at the St. Louis Medical School. Joe reports that he now has a full head of hair.

Samuel Krenitz, B.S., '27, is now going to The School of Medicine at W. R. U.

Nicholas Bukstein is now working in his own store. He received his Ph.G. degree here last June.

Hayes Heter, B.S., '27, is working in Lacer's Pharmacy at Clyde.

Mr. Henry Kumpf, Ph.G. of '26, is working at the Roth & Hug Drug Co. Canton, Ohio. He was back to school Monday, September 19th, and brought his brother Robert up. Robert Kumpf is now a Freshman as his brother once was.

Mr. J. G. Zverina, who received his Ph.G. degree in 1921, dropped into school this summer. He gave the Dean a German cigar which his brother had brought back from Europe.

Mr. Arthur Albrecht, a graduate of '14 with a Ph.G. degree is running his own store, located at 105th and Wade Park Ave.

Mr. William Reeb, Ph.G. of '17, owns a busy drug store on Euclid Ave. at East 90th Street.

Mr. Yasha A. Venar who was an Assistant in Botany here last year and who received his B.S. degree last June is now working at the Peerless Drug Co., 5425 Superior Ave. Rumor has it that he is engaged or married, but nothing is known for certain because he hasn't been back to see us this year.

Mr. Elias M. Rogoff, Ph.G. of '20, is now with the Metropolitan Vaudeville Circuit of this city. He says he is ready to help any talented Pharmacy School students work their way through school. Mr. Rogoff formerly owned a store at Cuyahoga Falls, Ohio.

Mr. Thomas Highland, Ph.G. of '26, is now working for the Marshall Drug Co. Mr. Bennett Gilbert another former student is working for the Standard Oil Co. Both are living at the Phi Delta Chi house at 11511 Mayfield Road.

Elmer Hudson, William Hulme, and Thomas McClain finished their work in summer school and will get their diplomas soon.

Mr. George Brown, Ph.G. of '27, is working at McClure's Pharmacy in Youngstown, and says he likes it there.

Mr. Horace Hartman who graduated in 1922 with a Ph.G. degree was married to Miss Ruth Seymour this summer. Mr. Hartman is manager of the Marshall Store at West 25th and Denison Ave. Mr. Lad Jirasek, another one of our graduates is assistant manager at this same store.

Another man who received his Ph.G. degree in 1922 was also married this summer. His is Mr. Rudolph Plent, and was married to Miss Grace Heslop on June 30, 1927.

We are very sorry to state that Dr. John A. Hurt who graduated from the School of Pharmacy in 1896, and from the School of Medicine in 1902, died July 12, 1927.

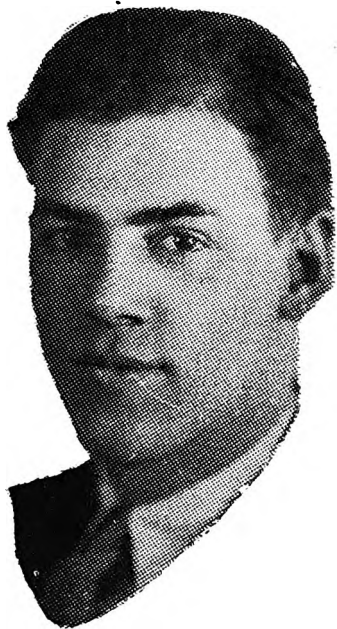
Mr. Donald English, a graduate of this school is now manager of the Marshall Drug Co. store at East 125th St. and Superior Ave. He reports that the business of the store is steadily increasing.

Mr. Tom Sords, Ph.G. of '22 is conducting his own store at West Entrance of the High Level Bridge. This store has been here since 1854. Mr. Sords has just returned from a ten week tour of Europe, and says that the European pharmacies are more ethical than those of this country.

Mr. Karl Gerold, a graduate of this school stopped in and paid Dean Spease a visit this summer. Mr. Gerold worked at the Sords Pharmacy for five years, but left the city a year ago. He is now located in Buffalo, N. Y.

Mr. Oscar A. Kiraly who received his B.S. degree in Pharmacy School in 1924, received his M. A. degree from W. R. U. in June of 1927. He has just been given the appointment of Instructor in Romance Languages at Syracuse University, Syracuse, N. Y.

Mr. Joseph Clinton, Ph.G. of '26, married Miss Josephine Murray on Thursday, September 8th at the Boulevard Presbyterian Church. Mr. Clinton is assistant manager of Marshall's store at Coventry and Mayfield Roads.



A SELF MADE MAN

"Tis not whence we come but whither we are bound." These few words are expressive in the case of a person who has overcome sharp obstacles in the path to his goal.—alone.

They fit very well into the life of the individual whose life history to date is chronicled in this sketch.

Walter Frederick Wargell, known as "Walt" by his many friends on the campus, and as "The Baron" by his fraternity brothers, entered this terrestrial orb of strife on the 4th of December, 1904, in Cleveland, Ohio. Circumstances were of such a nature that he was forced to work when he was 11 years old and he has been at it ever since with increasing energy each year. His first job, true to his profession, was in the neighborhood drug store, but he also cried the wares of the Cleveland Dailies both morning and evening. During this time he was attending Kinsman school, where he was one of the best scholars.

He was President of the first Student Council at Rawlings Junior High. Later he went to Central High, but was unable to participate in most of the sports because of his part time work. He did, however, become a member of the Junior Debating Society in his undergraduate high school years and later became President of the Senior Debating Club. He was also a feature writer for the "Belfry Owl", Central High's weekly paper. In orations, he handled capably roles ranging from that of a grandfather of the Civil War period, to one of a handsome young English lord who just returned from France. It so happens or perhaps we should say, happened that the leading lady in the latter play later became his real bride; but that is getting ahead of the story.

Walter entered the Pharmacy School of Western Reserve University in 1923, graduated in 1925 with a Ph.G. degree, and passed his State Board Exam the same month. He was President of the Freshman class and member of the Student Council in his first year. He was initiated into the Phi Delta Chi Fraternity in February, 1924, and has, at various intervals held all of the major offices of the chapter. He returned to school after getting his Ph.G. degree and for the past two years has been an Assistant Laboratory Instructor in Pharmacy, and in charge of the Hospital Billing and Stock-Room. Due to all this extra work, he was not able to carry his full schedule which would have given him his Bachelor's degree in 1927, but he is destined to get his degree in 1928. He is the

possessor of a Pharmacy Honor Key, and still maintains an active interest in all school activities.

These notes regarding Walt's life were obtained, not from Walt himself, but from, as the saying goes, his better half, and sorry to say, she neglected to say a word about the most important event in his life and in hers, also. Up until June, 1927, Walter led the life of a weary bachelor, but early in that month, he made the leap and slid down the ways into the sea of matrimony.

Miss Marie Patronskey, who, as was mentioned before, once played the part of a make believe bride, became a sure-enough reality this time and annexed herself to the Wargell clan. Mrs. Wargell has attended the University of Michigan, also Western Reserve University. At the present time she is engaged in directing dramatics for social agencies and libraries.

Walter has plenty of perserverance, frankness and pep, and enters into his work wholeheartedly. He hopes to have enough leisure, after spending an active and useful life, to read to his heart's content in a huge library of his own.

INTRODUCING DR. BACON

Dr. Bacon the most recent addition to the faculty, graduated from New London High School in Wisconsin and entered the University of Wisconsin in 1916, receiving the degree of Ph.G. two years later and became a registered pharmacist in the same year. After spending the summer and the first semester in the army in 1919, he re-entered the University and obtained the B.S. degree in Pharmacy. During these last two years, Dr. Bacon held a student assistantship in Pharmacognosy, working part time in the Wisconsin Pharmaceutical Garden.

In July, 1920, he accepted a position with Eli Lilly & Co., one of the largest drug firms in the nation, as Assistant-Pharmacognocist and later became head of the department. As head of the department, Dr. Bacon inspected crude drugs coming into the plant and prepared authentic powdered drugs and microscopic slides. He also assisted in several lines of research at the plant.

In the fall of '22, Professor Bacon entered the graduate School of Pharmacy at Wisconsin,

and received the M. S. degree the following year and the Ph.D. in '25. During the first year of graduate work, he held the A.M. Todd Fellowship on Peppermint and wrote a master's thesis on this subject. The last two years he held the Hollister Fellowship and worked on Digitalis. He continued the work during the following summer.

Professor Bacon has been at the University of Florida, Gainesville, Florida, since 1925, in the department of Pharmacy. He is a member of the Sigma Xi, Rho Chi, Kappa Psi, Alpha Sigma Phi, American Pharmaceutical Association, and the Florida State Pharmaceutical Association. It is not difficult to see that he comes to us well prepared as the Department head of Pharmacognosy.

PERSONALS

We have a pot pourri of Freshman girls this year.

We would like to introduce:

Wanda Jeanette Baygrowitz.

Graduated from Lincoln High in June, 1926. (Spent few months in a Beauty Culture School, but intends to spend a few years in Pharmacy School.)

Ruth Kotershall.

Graduated from Lourdes Academy.

(One of the girls who decided Chemistry was not so bad after all—she received an A grade last examination.)

Lotie Dorothy Mentowski.

Graduated from South High in 1924.

(One who intends to take Pharmacy seriously.)

Ethel Margaret Kolozevary.

Graduated from John Adams in 1927.

(One who has dusted many a drug-store shelf during seven years.)

Mary Rita Derda.

A graduate of Notre Dame, 1927.

(The girl who found out that the Eldred Barber Snop sells candy. Sophomore girls promoted the discovery.)

Mary Kondash was a bit late in crossing the ocean to get here. (She maintains that she may not have increased her pharmaceutical knowledge by her trip abroad, but

her liberal education was enhanced.)

The Pirson sisters, Ruth and Mildred, spent their summer in diligent study at Ann Arbor.

The Phi Kappa Omicron Sorority gave a Hallowe'en party October 28th in the old dormitory on the Campus. Radiator heated cider, doughnuts and black and yellow pastry!

Miss Margaret Hewitt who spent three years with us is now Assistant Pharmacist in St. Elizabeth's Hospital, Youngstown.

AN OPEN LETTER

Editor of the PHARMACON:

I take this opportunity to express myself on two matters, one of major and the other of minor importance to our school.

First, in my humble opinion, our School of Pharmacy curriculum is inadequate. In spite of the many efforts taken to better the courses, there are still some which need revision. The courses in economics, as now taught, are of little value to the Pharmacy student. They teach him the rudiments of business only as they are necessary on a large scale. They neglect to teach him the manner in which to supervise a drug store, which is far more important to him. As a suggestion, a course in modern salesmanship should be substituted for economics. This would not only eliminate an unnecessary course but would give the student knowledge which will help him in later life. Regular mathematics should also be dropped from the Pharmacy curriculum. A knowledge of such subjects as trigonometry, analytic geometry and graphing is of no specific value to pharmacists. Besides, the freshman course in Pharmacy mathematics fully covers all types of calculations that the pharmacist needs.

In addition to the present curriculum there should be a course in practical Pharmacy that includes window trimming, displaying and show-card writing. There is no doubt that these are of immense value to every practical business man. They are very helpful in making sales. We frequently see drug stores, or any kind of stores for that matter, that are not attractive because of ineffective displays or poorly trimmed windows. Another addition to the curriculum should be a second year course in English. The first year course should in-

clude a thorough training in composition and rhetoric, a minimum amount of outside reading and a short survey of English literature. All of these should be required. The second year course should deal with English literature and public speaking. The first semester would include a more complete study of the classics. It would require few themes, the emphasis being placed on their quality. The second semester would include elocution, debating and public speaking. All of these would prove valuable to the pharmacist in business.

The other matter that I have in mind may not be one of vital importance to the School but it is one, I am sure, that greatly interests the majority of my fellow students. It deals with the sophomore initiation of freshmen that has, until this Fall, been held a few days after the opening of School.

I cannot agree with the idea that these initiations should be discouraged. In view of the fact that certain other units of the University have an annual flag rush and mace ceremony in addition to many other fracas occurring throughout the school year, it surely is not going too far for us to have a single initiation. Besides, our initiations are gentle in comparison with these other bruising, clothes-tearing and body exposing affairs.

What's the good of being a sophomore, quoth I, if one cannot initiate the frosh? Last year I underwent my initiation with the semi-solacing thought that this year I would be able to do likewise to the verdant pharmacy tyros. Yet, when I return I find that my hope for solace is in vain.

There may be some understanding between the School and University. In that event I tender an apology and beg not to be misunderstood.

Very truly yours,
MYER KARNER.

EDITORIAL NOTE: Lets have more of these open letters from the student body, or the alumni for that matter. Most of us have a tendency to criticise School affairs occasionally. Why not express our thoughts in writing? Constructive criticism is always welcome.

— EXTRACTS —

SIFT FIXING OF RESALE PRICES

Federal Trade Commissioners Investigate
Practice Binding Retailers

For benefit of trade and industry and guidance of Congress, the Federal Trade Commission is laboring at a broad investigation to determine the merits of "resale price maintenance," fixing and enforcing sale prices of commodities.

Extensive conflict among business men, legislators and courts over the price-fixing practice, which if extended would tend to eliminate all price-cutting, led the commission to order the survey, which will be carried out under supervision of its chief economist, Dr. Francis Walker.

The commission expects the survey to be "of great value to trade and industry and to Congress in the writing of future laws on the subject." Several bills providing for resale price maintenance have been introduced in Congress since 1920, but this is the first really comprehensive impartial investigation of the subject ever undertaken, according to commission officials. The commission believes agitation for such legislation will continue.

The resolution for the inquiry proposed by Commissioner A. F. Myers, was adopted by the commission unanimously.—N. Y. Times.

RESEARCH IN PHARMACY

Survey Shows 401 Workers Engaged in It in This Country

There are 401 research workers in pharmacy in the United States, according to a census just completed by the National Conference on Pharmaceutical Research, of which Henry V. Army, Professor of Chemistry in the College of Pharmacy of Columbia University, is Chairman. During the current year there has been an increase of 104 research workers over the number engaged in this work last year, and 162 more than in 1925.

Professor Army announced the results of his census at a recent meeting of the American Pharmaceutical Association at St. Louis. He reported:

"The census represents a really thorough survey of the field. Practically every college of pharmacy where research work is performed and practically every first-class pharmaceutical manufacturing corporation is now included in the list."

The 401 research workers are distributed as follows:

"Pharmaceutical teachers and their students, 181; manufacturing pharmacists, 138; non-pharmaceutical teachers and their students (chemists and pharmacologists), 31; practicing chemists, 8; governmental scientists doing pharmaceutical research, 17; pharmacists engaged in medical school work, 4; retail pharmacists, 12; wholesale druggists, 5; hospital pharmacists, 5.

"While research in pure pharmacology has been intentionally left from the census, since it is desired to limit the list to the making and dispensing of medicines, the 1927 census does include the name of one pharmacologist distinguished for his work on the synthesis of new organic medicaments, and it also records the work being performed by ten of his pupils.

"An interesting addition to the list is the group of eleven persons now studying the problem of drug merchandise distribution under the auspices of the recently created Drug-gists Research Bureau."—N. Y. Times.

ORIGIN OF VITAMIN D

Fish May Synthesize It in Their Own Bodies

There is little doubt at present that various vitamins can be stored in the body, asserts The Journal of the American Medical Association.

"As a consequence," says the writer, "the reserves of these nutritional essentials may vary at different times, depending on the quality and quantity of the intake. With respect to vitamins A, B, and C it is commonly assumed on the basis of available experimental evidence that they cannot be synthesized by the animal organism, which consequently depends on exogenous sources for the necessary supplies. The antirachitic (curative of rickets) substance—vitamin D—has been less extensively studied as yet, so that its origin and fate are not so clearly indicated.

"Vitamin D occurs in some fish oils—notably in cod liver oil—in egg yolk fat and to a small extent in milk fat. As a rule the vegetable fats are not antirachitic. A few in-

stances of undoubted potency in oils of plant origin have been ascribed to the effect of solar irradiation of the products incident to their commercial preparation. This is true of coconut oil prepared from sun-dried copra. Whereas plants furnish the other vitamins in considerable abundance, so that the latter are generally believed to originate principally in the vegetable kingdom, the same conclusion is not directly applicable to vitamin D.

"Bills (Dr. C. E. Bills) has essayed to learn the origin of the liberal supplies of this vitamin in the codfish. He ascertained that the principal food (caplin) of the Newfoundland codfish apparently does not contain enough vitamin D to account for the vitamin accumulated by the cod during its midsummer period of fattening. Piscicultural experiments demonstrated that the vitamin D of catfish oil was not increased by irradiating the fish; and it was not decreased by keeping the fish for six months in the dark on a vitamin-deficient diet.

"These observations raise the question as to whether vitamin D cannot actually be synthesized by certain species. Incidentally it is of practical interest to learn from Bills' tests that the oils of such common food fish as the herring and the sardine rival the cod in anti-rachitic potency."—N. Y. Times.

CHEROKEE MEDICINE

Still Investigated With Superstition by Remnant of Nation

The Cherokee Indians of the Carolina Mountains take no account of modern advances in medical science. Dr. Frans M. Olbrechts, ethnologist, who recently returned from an expedition under the Bureau of American Ethnology of the Smithsonian Institution to the reservation in North Carolina, reports that the modern Cherokees, like their ancestors, are still more concerned with how medicine is given than with what it is.

If a man has worms, for instance, the medicine given to get rid of them must have flint arrowheads put into it to impart to it the cutting quality of the stone so that the worms may be cut to pieces. Certain remedies are only effective if administered in a gourd dipper. Also, the incantations accompanying

the gathering of the plants from which the drugs are made and accompanying their administration must be letter perfect, or no good will come.

Dr. Olbrechts brought back to the Smithsonian for exhibition in the National Museum, various articles illustrating the primitive and superstitious nature of Cherokee medicine. These include a blow tube used by the medicine men and women to sprinkle or blow decoctions and infusions upon affected parts of the body; a piece of uncut flint for treating rheumatism and like ailments; a magical transparent stone, alleged to possess mysterious powers in the elimination of disease; and a medicine man's vari-colored cloth, which is designated by words meaning "take it away." In this cloth the doctor wraps up and carries away the cause of the disease, which is always a spirit or supernaturally injected object, after its removal.

The Indians studied by Dr. Olbrechts are the remnant of the once powerful Cherokee Nation which formerly dominated territory now embraced in the Southeastern States. They are the descendants of those who fled to the mountains at the time of the forcible removal of the tribe in 1838 to a reservation west of the Mississippi. They are still so isolated that few of them speak English. Incidentally, their written language presents a rarity. It was created by a half-breed Cherokee named Sequoya in the beginning of the nineteenth century. Sequoya took the English letters and, changing them as he saw fit, made a Cherokee alphabet. This was adopted by the Cherokee Government, which, thanks to the work of missionaries had made rapid progress toward civilization. A national press was established and considerable body of printed literature appeared in the native language.—N. Y. Times.

Expressed Oil

Mr. Newlywed—And how are you getting a'long with the druggist, darling?

Mrs. Newlywed—Oh, splendidly—when I order a four ounce bottle of Milk of Magnesia he always sends a pint or a quart.

Our idea of the best job in a drug store is

testing out kiss-proof lip-sticks.

Back to your cell cried the ganglion to the red corpuscle, I won't have you crossing the arteries in such a manner.

A good friend will do most anything for you except use the suppository machine you insist upon lending him.

Latest addition to Burbankism: Cross Potassium nitrate with Tannic Acid and you get a lilly and it won't be from Indianapolis either.

CAMPUS SLANG

Zingiber—Hot Stuff.
 Pestle—A Good Mixer.
 Fel Bovis—Sour Bull.
 Rhus Tox—An Old Maid.
 Nitroglycerine—One who has to be handled with care.
 Full of Cola Nuts—Full of Pep.
 Alium—Halitosis.
 Cocoa Butter—Same as Banana Oil.
 Rosin—So tight he squeaks.
 Lydia Pinkham—Our Patron Saint.
 Valerian—Ben Hur Perfume.
 Wahoo—A good line of Hokum.
 Mentha Viridis—Wrigley's.
 Wild Yam—A Fraternity brother gone loco.
 Retort—A hip-flask.

THE NEWER MATERIA MEDICA

<i>Disease</i>	<i>Old Style</i>	<i>New Style</i>
Throat Affections	Demulcents	"Old Golds"
Halitosis	Aromatics, Spices	Listerine
Cough	Expectorants	Lucky Strikes
Thirst	Gordon Water	Oil Juniper—
Malnutrition	Tonics	A cake a day.
What have you —if any?	Lydia Pinkham	"Snoopy Confessions"

Professional Discourse

"Gimme a Coke."

"Pass me the mustard, please."

"Yes, Madame, these dolls are guaranteed to say 'Mamma'."

"I am sorry, Mister, but all sales on toys are final."

"Chenille Rugs? Third case to the right."

"One up on the custard pie."

"My dear lady, you evidently have been misinformed. We do have a prescription department."

Assistant Pharmacist: Boss, I-I've just made a terrible mistake.

Ph.G.: What was it?

Assistant Pharmacist: I-I put up three hot-dog sandwiches with mustard for a fellow who always wants horse-radish with them.

If you don't think Prohibition is a success, just check up on the amount of White Rock Water that is being sold.

Customer to Druggist: What have you for a cold?

Druggist: Here you are Sir, a package of Old Bolds, not a cough in 10¹⁰.

How to Commit Suicide

(1) Go to Pharmacy School. Enroll in the Dean's class. Chew Gum. Converse with your neighbors during exams. Praise the Irish. Use perfume. Point out the advantages of Aspirin. Tell a lie.

(2) Study Chemistry. Laugh during lectures. Ignite perchloric acid. Calibrate a set of weights. Work problem No. 287. Graphite your weighings. Drink cleaning solution.

(3) Become a Pharmacognocist. Drop phloroglucen on microscope lens. Forget to read U. S. P. Stay away from quiz. Chop down Cascara trees. Fail to know your "Organic".

(4) Enroll in Prof. Chamberlain's class. Make suppositories. Go home at 4:29. Discuss Wild Cherry. Assume flippant attitude. Begin a sentence with "Everyone is now using". Ask for some alcohol. Fail to pay attention to lectures.

(5) Take Analytical Pharmacy. Appear for only one lab a week. Praise the M.D's. Discuss the advantages of theoretical analysis. Play with the Spectroscope.

There's at Least One in Every Drug Store

He comes to work late every morning.

He tells everyone else what to do.

He wants to wait on all the lady customers.

He drinks a Cola every half hour.

He smokes while on duty.

He always refers to the firm as "I".
 He knows everything.
 He is the boss's son.

Our Secret Ambition

To be able to laugh like Gayok.
 To take a man's size chew of tobacco like
 George Pauer does.
 To handle the Freshman like the Dean does.
 To be as good a student as Sister Adelaide
 or Sister Jeanne Marie.

If you haven't "IT" Here's Your Chance
 Now that the Druggists have put in a line
 of hosiery it won't be long until they have
 that much called for Sox-appeal.

You certainly know your groceries, re-
 marked the customer to the Druggist as he
 picked up his package of strawberry pre-
 serves and went his way.

The real millennium will come when the
 Druggist and the Doctor shall lie together.

Vaudeville Musician—All right folks—
 Speak up, what other song would you like to
 hear?

Voice from one engaged in the Coat and
 Pants business—The little gray suit 'n the
 vest.

It is suggested to those druggists who wish
 to set up a business in Scotland that they thor-
 oughly familiarize themselves with the drop
 system.

**What every novice expects to find in a
 Drug Store—**

A professional atmosphere.
 Pharmacists busy helping sick people to get
 well.

The boss supervising the manufacturing of
 U. S. P. and N. F. preparations.

Prescriptions being earnestly compounded.
**What every novice actually finds in a
 Drug Store —**

An atmosphere of custard pie, pork sand-
 wiches and coffee.

Pharmacists busy helping people decide
 whether they want a kewpie doll or an auto-
 tire.

The boss supervising the latest 1c sale.
 Prescriptions being earnestly wanted.

THOSE WERE THE GOOD OLD DAYS

When cotton sold at 5c an ounce.

When C C Pills were a cathartic.

When zinc oxide ointment was a salve.

When Soda Bicarb was "Bakin'" Soda.

When White Liniment was White Liniment.

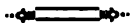
When Drug Stores actually filled prescriptions.

When a Pharmacist was a Pharmacist.

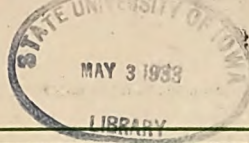
Motorist (to a druggist who is standing be-
 fore his store enjoying a little air)—Would
 you mind watching my car while I do a bit
 of telephoning.

Druggist—I beg your pardon but I am the
 Pharmacist.

Motorist—That doesn't matter. You look
 to me like an honest man.



Pharm.

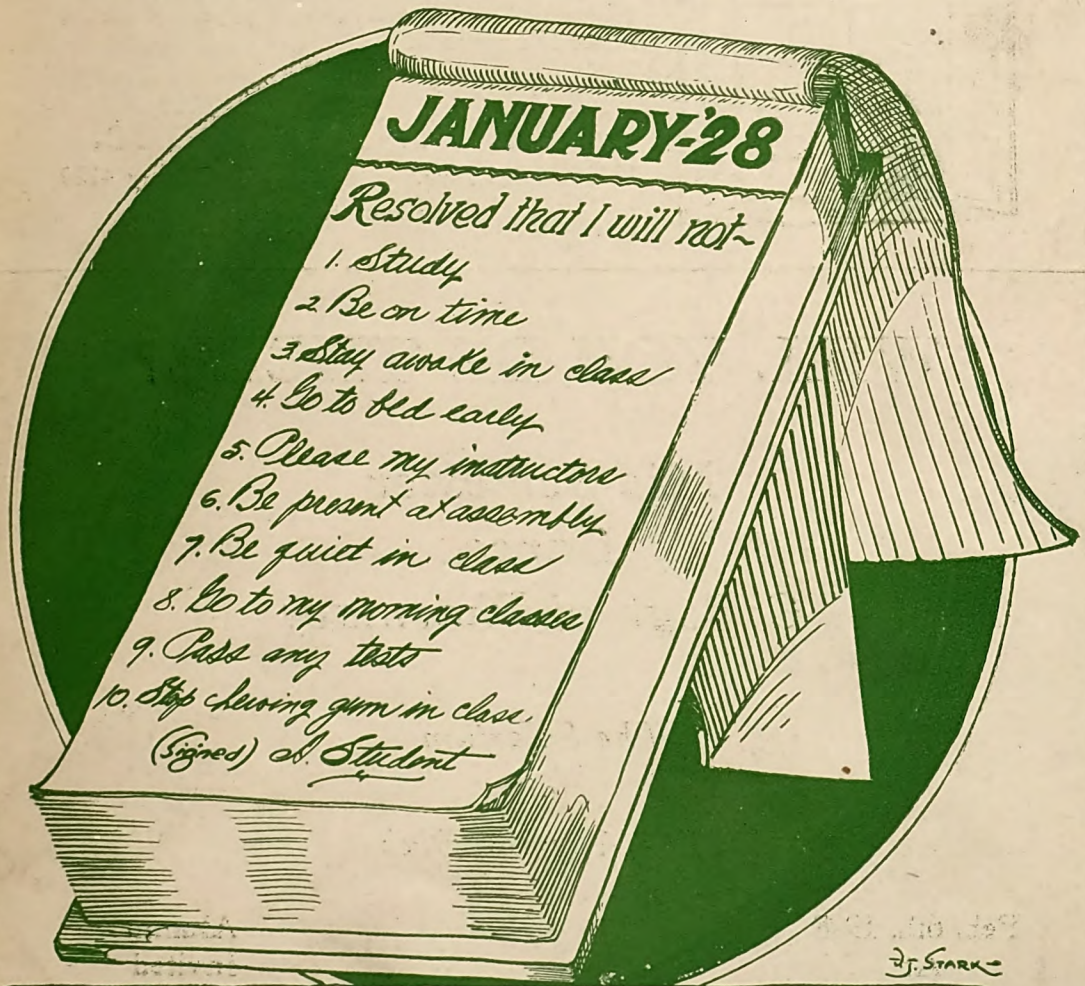


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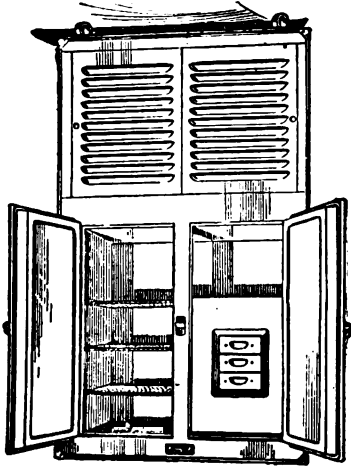
No. 1



THE COLLEGE STUDENT'S NEW LEAF!

Frigidaire ELECTRIC REFRIGERATION

*The world's best way to preserve
Biologicals and Biological Products*



INSURES absolute preservation and cleanliness, saves time and trouble. Costs very little to operate. Runs quietly. Frigidaire is a product of General Motors and is the largest selling electric refrigerator on the market.

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The Reserve Pharmacon

A Publication Dedicated to Professional Pharmacy

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

The Cultivation of Medicinal Plants

By Dr. F. J. BACON, Professor of Pharmacognosy

The earliest medical practitioners of any sort and among all peoples have been reported to be herbalists. They were in most cases, women who had acquired a knowledge of the healing properties of herbs. How they came to possess this art is difficult to establish. Old writers suggest that they got hints by watching animals and by applying experiments along the lines suggested, and from accident both happy and fatal, they would gradually acquire empiric learning.

Very soon these herb experts would begin to prepare their choice herbs in various forms so as to make them easier to take or apply, making teas, ointments and mixtures. Thus the art of Pharmacy would be introduced. The herbalist and pharmacists among primitive tribes would accumulate facts and experience and finding that their skill and services had a market value which enabled them to live without so much hard work as their neighbors, they would naturally surround their knowledge with mystery and keep it to themselves or in particular families. The profession of medicine thus started, the inevitable theories of supernatural powers causing diseases would be encouraged, because these would promote the mystery already gathering around the practice of medicine, and from them would come the superstitions and impostures which have been its constant companion, and which, at present, are very much in evidence.

Medicine and magic became intimately associated, empiric knowledge, superstitious beliefs and conscious and unconscious deceptions, became blended into each other, which formed a fixed and revered system of medicine.

A knowledge of drugs and their uses was possessed by the ancient Chinese. Certain remedies as ginseng were accorded almost superstitious reverence, due to the shape of the root resembling the human body. The

ancient Greeks were familiar with the use of drugs before the time of Homer. Hippocrates (B. C. 460-377) is known as the father of physic. His teachings extended through many years, and medical art as now practised dates from that time. In A. D. 77-78, Dioscorides, the first to write on medicinal plants, wrote a book enumerating some 400 plants, many of which are in use at the present time.

As time progressed, more and more vegetable drugs were added to the *materia medica*, and at present, about 600 crude drugs are used in the United States.

The term *Drug* to some people means a narcotic—something to be taken to relieve pain or to put one to sleep. To others, it means an individual chemical or crude product that is used in preparing or in compounding a prescription. To still others, it means any medicine, and this comes nearer to a true definition for it is any substance or mixture of substances used in medicine, or that enters into the composition of a remedial agent. The term *crude drug* as we use it, is the portion of the medicinal plant in the form in which it occurs in commerce.

The public has always shown considerable interest and curiosity about drugs and medicines. This is partly due to the shroud of mystery with which the family doctor and the corner druggist have veiled the character of the contents of bottles and powders that have found their way to the bedsides of almost all of us at some time or another. The hieroglyphics with which the physician covers the small piece of paper which later turns out to be a bottle of medicine or a number of capsules, stir our imagination. We read with much enthusiasm, any article dealing with the subject of patent medicines, regardless of its inaccuracy. And now no daily paper is complete without its section devoted to what a certain doctor says.

When we survey the list of botanical drugs that are in great demand by the druggist and manufacturer of medicines we find that some of them might be cultivated in a country possessing the climate of our United States. Many drugs grow naturally in our country, and we have always been able to supply our own needs of Golden-Seal, Senega, Mandrake, Cascara, Wild Cherry, and many others of lesser importance. With the exception of Golden-Seal the drugs have been gathered from wild growing plants. Most of the so-called pot herbs such as caraway, dill, anise, horehound, thyme, tansy, chamomile and calendula, have been grown locally in this country and are usually gathered by the individual consumers but the bulk of supplies

York, Michigan, Ohio and Indiana in increasing quantities, since the early eighties, due to the gradual extermination of the wild plants which were collected by woodsmen and trappers to supply the export trade



Foxglove (*Digitalis purpurea* L.) a cultivated plant



Blood-Root (*Sanguinaria canadensis* L.)
wild-growing plant

used by the drug dealers have been imported from Europe. The same may be said for dandelion and burdock root; while the plants themselves are troublesome weeds, the supplies for medicine-makers have always been gathered abroad. In foreign lands, medicinal farming has been in progress for many years. Cinchona plantations (the bark yielding quinine) are established in Java and practically all the bark in commerce comes from this source. Coca is cultivated in South America; Belladonna and *Digitalis* are grown in England and on the continent; and Belgium has long been noted for its valerian.

In a few instances, medicinal farming has prospered in the United States. A few manufacturers of proprietary medicines have grown their own drugs for use in their particular preparations. Ginseng has been cultivated on small plantations in New

with China. The growers of Ginseng have extended their operations to the production of Golden-Seal and now the bulk of the supplies of both of these drugs are cultivated.

The popular interest in drugs has, of late years, been stimulated by several factors, the most important of all being the war with Europe. In the demoralization of ocean traffic that came with the war, the supplies of crude vegetable drugs were seriously menaced and became a matter of daily mention in the newspapers. Interest in the cultivation of medicinal plants became almost universal.

In certain sections of the country, important industries have originated thru the collection of our native botanical drugs. In the Carolinas, many drugs have been collected on a commercial basis. In the Middle West, especially in Indiana, the collection of Mandrake and Golden-Seal is extensively handled. One dealer operating in the state, is reported to handle the world's largest quantities of Mandrake and Golden-Seal.

At the present time, our supplies of native vegetable drugs are obtained almost entirely from local drug collectors who go about the countryside taking up and preparing our natural wild-growing plants which are used in medicine. This practice of collecting the wild-growing plants has

prevailed for many years, and in recent years the supplies of many of our natural drugs has become almost extinct. The need for a systematic treatment of our natural wild-medicinal plants has become apparent by the ever-reducing supply of drug plants. The United States, alone in the manufacture of Cascara, uses in the neighborhood of 50 carloads of bark stripped from the wild-growing trees on the northern Pacific coast with no regard for future supply.

A number of the common medicinal plants are being cultivated in this country, either as ornamentals or as a source of herbs used in cooking or in domestic remedies. A very few of these drugs, such as peppermint, digitalis, belladonna and hyoscyamus have been successfully cultivated on a commercial basis for sale as Belladonna (*Atropa Belladonna* L.) Cultivated Wisconsin Pharmaceutical Garden certain localities. Gardens for the cultivation of natural and introduced medicinal plants have been undertaken in an experimental way by many of the Pharmaceutical colleges of the country. Most of these gardens are on a very small scale, 1 acre or less, with the exception of the Arlington Gardens in Washington and the Wisconsin

dens also serve as a means of instruction in course work in the Colleges of Pharmacy.

There are several conditions that confront the growers of drugs of any variety. The demand of the medicine manufacturer for his staple drugs, though apparently large, is nothing like the demand of the public for general food commodities such as wheat, corn, potatoes and, while the thousands of acres are required to furnish supplies of the latter, sufficient belladonna for our entire consumption can be produced



Belladonna (*Atropa Belladonna* L.) cultivated Wisconsin Pharmaceutical Garden



Ginseng (*Panax quinquefolium* L.) growing in the wooded area of the Wisconsin Pharmaceutical Garden

Pharmaceutical Garden at Madison, Wisconsin. A wide variety of medicinal plants are being experimented with in open fields and in partially shaded areas. The purpose of these gardens, is to investigate the culture of medicinal plants and to supply information on this subject to those who may wish to undertake the cultivation of such plants for commercial purposes. The gar-

on perhaps 200 acres. The danger of over-production is one of the important economic factor that greatly influence large and successful drug-raising industry in the United States. The cultivation of medicinal plants requires the same outlay of farm machinery as is commonly seen on any farm. In general, the field equipment and the labor force of a drug farm are the same as required for any kind of agricultural enterprise, and the operations of plowing and hoeing are the same. But the similarity ends there, because a knowledge of the peculiarities of the individual species under cultivation, the character of the soil to which it is adapted, is very essential. It is not an undertaking that can easily be carried on by the average farmer who is familiar only with the cultural and marketing conditions obtained with field crops. Nor, except as a pastime, does it hold out any inducement to the small occasional grower with a small garden or a vacant city lot.

The conclusions derived from the experiences of those who have been in close touch with the problem, and from the report of actual operations, are ably summarized by

Dr. W. W. Stockberger in a bulletin issued by the Department of Agriculture in which he states that, "The production of drugs of high quality requires skilled management, experience in special methods of plant culture, acquaintance with the trade requirements, and a knowledge of the influence of time of collection and manner of preparation of the constituents of the drug that determine its value. Small quantities of drugs produced without regard to these conditions are apt to be poor in quality and so unattractive to dealers and manufacturers that the products will not be salable at a price sufficient to make their production profitable." In general, the outlook for drug cultivation in this country is far more favorable to the man who cultivates drug plants as a special industry, maintaining a control laboratory and special apparatus for the extraction of the active constituents, than for the general farmer, whose general interest lies in the production of other crops.

The cultivation of medicinal plants in this country will gain in popularity only through a method of producing drugs of higher quality, containing a greater amount of active constituents than those which are imported from abroad. This is being done by careful cultural experiments along the lines of breeding and selection. We will never be able to compete with the cheap foreign labor and it will be impossible for us to raise many of the plants which are secured from Europe. For instance, saffron, which was formerly widely used in medicine and which still enjoys a favorable demand both as a drug and as a condiment, consists of the orange colored stigmas of the flower of a low growing bulbous plant, cultivated commercially in South Europe. The stigmas are removed from the flower by hand picking. About 50,000 flowers are required to produce one pound of dry saffron. Even with this amount of hand labor involved, the drug can be produced at a profit with the aid of the cheap child and woman labor of southern Europe. It would be impossible to produce drugs of this nature in this country under the existing scale of almost any kind of farm labor.

The United States is looked upon as the original source for many indigenous drugs. As the supplies of other species of our native staple drugs such as senega, pinkroot,

aletris, cascara, etc., begin to dwindle, it will be necessary for someone to undertake their cultivation, the study of their growth and habits under artificial conditions is now being worked out in the various Pharmaceutical Experiment Stations. In the case of exotic drugs, the fate of the industry will depend upon our ability to produce drugs of greater activity and of higher quality in order that we may compete with the less expensive imported material of inferior grade.

Chemistry's Contribution to Progress

By Gerald W. Wagner, M. S., Instructor in Chemistry

The history of mankind is full of periods, during which no material progress was made, when the life of one epoch resembled very closely that of another. These periods are always characterized by the absence, or fewness of discoveries. In the absence of new discoveries there is little change in the life of man.

Man's material progress, that is, his extended life, his increased wealth, his multiplied conveniences, is primarily the result of chemical discoveries.

Primeval man discovered and learned to use the chemical reaction called fire, and thereby drew the first sharp line of demarcation between himself and the beasts. Later he discovered that by a chemical reaction copper and tin could be produced from their ores. By use of this knowledge he laboriously provided himself with better tools. This initiated the Bronze Age.

Less than four thousand years ago man mastered a greater chemical process—the production of crude iron. This established the Iron Age, now developed into our Age of Steel. With better tools came better opportunities; simultaneously man's mental development increased and broadened.

The debut of modern chemistry dates from the end of the eighteenth century, just one hundred and fifty years ago. Since then chemical discoveries have appeared at an ever increasing rate. Today there are twelve hundred journals publishing works of a chemical nature. So vitally fundamental are some of these discoveries that an anticipation of the future of mankind causes one to encourage and to caution.

Medicine was revolutionized by Pasteur, the chemist, who brought chemical methods

to the study of disease, and thus discovered the biological basis of infection. Since this discovery the drugs used have been numerous and diversified; such as ethyl chaulmoograte for leprosy; arsphenamine for syphilis; thymol for hookworm; ether, chloroform, novocaine, and nitrous oxide as anaesthetics; mercurochrome, and bichloride of mercury as antiseptics. All of these are the products of chemical discovery.

The people of the world, distributed unequally as they are, dependent upon the products of agriculture for life, present a problem in agriculture. Like medicine, agriculture rests on chemical reactions; for plants, like animals, are chemical machines.

The fertility of the earth depends upon certain substances, needful for growth, but not always present in soil. The chemist increases the yield per acre by preparing the correct plant foods. Some of the fertilizers used are phosphates, potash, nitrates, and nitrogen in combined form. They must be employed more and more as the population increases.

The problems of our industries are possibly the most urgent; our progress and future well being depend upon their solution. The annual expenditure by the industrial organizations of the United States, for research aggregate \$200,000,000. Any one of our large industries spends each year, for research, enough to pay the annual running expenses of any one of our large universities.

Industry takes raw materials and fashions them into useful products. In this competitive age the manufacturer must deliver the best product for the least money. His problem thus becomes one of a chemical nature. The chemist selects the raw materials. He decides if they can be replaced by more suitable materials, either natural or synthetic. He supervises every step of their intricate and numerous transformations, until the final product is in the hands of the consumer.

From a chemical viewpoint, the industries manufacture only two types of products:—the one, such as the fuels, dyes, drugs, explosives, and foods which have a market because of their specific chemical behavior; and the other, such as the metals, glass, soaps, rubber, paper, textiles, and building materials, which have a market because of their physical qualities which chemical

treatment has given them. Every industry has its chemical problems.

The United States, rich in natural resources, has hardly begun to feel the pinch of scarcity which has harassed other parts of the world. Nevertheless, many of our now plentiful resources must sometime dwindle, as our forests and oil reserves have already dwindled. The chemist is recognized as one of the prime agencies for utilizing all that remains. Upon the chemist falls the task of discovering substitutes to take the place of the metals, coal and oil, when they are gone.

Some Comment on the Progress of Medicine

In the December issue of "Hygeia" we have observed with mingled interest the rather poignant progress of Medicine during the year 1927. The most salient contribution is that relative to pernicious anemia. As is well known in this disease, the red blood cells which supply the body with oxygen, are rapidly destroyed and new ones fail to develop in sufficient numbers or quality to care for the bodies requirements. As a result, all kinds of secondary symptoms develop, including great weakness, shortness of breath and disturbances of digestion and of the nervous system. The patient becomes pale. Before the discovery of the present method he passed on rather quickly to death. The new discovery is nothing more than an adherence to a liver diet. For years physicians have been accustomed to give iron to correct deficiencies of the blood and blood-forming organs. Investigators found that meats, and particularly liver and lamb kidneys, were especially beneficial in such deficiencies and were inclined to attribute the effect to the iron content. Other investigators though they secured beneficial results from the feeding of liver, attributed the beneficial results erroneously to the vitamine A content. It remained for Minet and Murphy of Boston to prove most conclusively that better results could be obtained from ample liver diets than from any other method now known.

Another discovery of great interest and especially to these who are interested in bacteriology is that the germ responsible for trachoma, the infectious granulation of

the eyelid, has been found. The discovery was made by Noguchi, the famous Japanese investigator of the Rockefeller Institute. Trachoma is particularly common among the American Indians and it was at the special request of the U. S. Department of the Interior and the National Committee for the Prevention of Blindness that Noguchi undertook his work. He has isolated the germ but has not as yet developed a definite means of inoculation against trachoma. However once the cause of the disease is definitely known, the road to its treatment is but the application of human intelligence.

Progress of note has also been made in the last year regarding the effects of light on the human body. Apparently the sun's rays have powers of which Jules Verne at the height of his imagination never dreamed. It is now definitely proved that the exposure of living tissue to ultraviolet light gives rise to a substance which is the forerunner of the vitamins. The substance is called sterol and ergosterol is apparently the antecedent substance to vitamine D. Unquestionably, the taking of cod-liver oil, which contains vitamine A and the rickets—preventing vitamine D, and the exposure to the sun's rays will prevent rickets.

The three discoveries mentioned are only a few of the thousands that have been made by medical scientists working in laboratories all over the world. Furthermore the science of medicine is not static. It gleans from other sciences, chemistry, physics, anatomy, biology pathology, botany and many others. It has availed itself from contributions made inside and outside its own ranks. It learned from a monk how to use antimony, from a Jesuit priest how to cure chills, from a friar how to cut for stone; from a soldier how to treat gout; from a sailor how to treat scurvy, from a postmaster how to investigate the eustachian tube which passes from ear to throat, from a dairymaid how to prevent smallpox and from an old market woman how to catch the itch insect. Oliver Wendell Holmes, that grand old literary man of Medicine first taught us these facts. May we point out that Medicine stands heavily in the debt of Pharmacists. From Baume, the discoverer of the hydrometer, it learned to rid itself of the traditional use of disgusting and abominable substances as therapeutic agents. Bolduc by his brilliant essays on Epsom.

Glauber and Seignette's salts brought these saline cathartics into popular use. Scheele laid the foundation for further cures in many fields by his discovery of Oxygen, Chlorine, glycerine, arsenic and benzoic acids. Serturmer has eased many a diabolical pain by his discovery of Morphine. Malaria has been practically banished from civilized lands by the judicious use of quinine discovered by Pelletier. To Madame Nouffier goes the merit of having found the cure for tape-worm. Count Rumford first showed heat to be a form of energy thereby dealing the phlogiston theory its death-blow. The anesthetic effects of nitrous oxide were first observed by Sir Humphrey Davies. Iodine with its universality of uses was discovered by a French pharmacist. Courtois; Thenard gave the world hydrogen peroxide; Balard, bromine. Pasteur began life as a pharmacist and later developed a branch of medicine, which we today know as bacteriology. Pasteur was never a physician although he spent his entire life bettering medical science. We might name many others in pharmacy of our own day who have enriched medicine. The names of Remington, Beal, Lloyd, Arny, Beringer, Rusby, Whepley and Dunning stand out as worthy contributors. Nor is this the end. Pharmacy will always contribute to the health of mankind and the growth of medicine.

N. F. V DIAGNOSTICAL REAGENTS

During the past year many inquiries have been made at our laboratories with regard to several quite commonly used diagnostical reagents. In view of the fact that most of these inquiries concerned formulae which may now be found in the last revised edition of the National Formulary, we take this opportunity to mention a half dozen examples, viz:

Benedicts Qualitative Reagent (For Sugar Reactions)	Page 434
Benedicts Quantitative Reagent (For Sugar Reactions)	Page 434
Haines' Solution (For Sugar Reaction)	Page 434
Isotonic Sodium Citrate Solution (For Blood Dilutions)	Page 435
Wright's Stain (New and Complete Formula)	Page 437
Gabbett's Stain (Acid Blue for Tubercle Bacilli)	Page 438

It will be noted that the list of diagnostic reagents in U. S. P. IX does not appear in U. S. P. X, and, as a consequence, the list was taken over by N. F. V with some additions, the most important of which are noted above.

SELECTED

In its forthcoming issues the PHARMACON proposes to print what it considers the best recent article dealing with pharmacy. Well written articles that are reflective in thought and broad in vision, tending toward both the idealistic and the practical, will be selected from the numerous publications coming to our library. While the following article is from a foreign journal, the ideas set forth are entirely applicable to pharmacy in this country and point out, it seems to us, some very significant things to think about.

HOW FARES IT WITH PHARMACY?

As a political pamphleteer, Carlyle is seen in his less but not least amiable light. When these blasts and counter-blasts of his were published, there was much discussion current in this country on "The Condition of the People Question," and as was inevitable, opinion on the subject was violently divided. On the one side were the worshippers of the past, and all its institutions and usages, who would have it that this was and must ever be the best of all possible worlds so that all change is wicked, although in the very terms of this philosophy, even evil is our good. On the other side were the dreamers and the iconoclasts who boldly proclaimed that all was wrong with the world, which they said was visibly hastening to decay and death, unless some drastic remedy were speedily applied, and, of course, they knew exactly what kind of remedy to prescribe. The trouble was that even when the patient could be persuaded to try it, he became worse instead of better. These things are a parable. Such antagonistic forces are constants of human society, and, like all extremes, the whole truth

is in neither of them, but somewhere between the one and the other pole.

The Pharmaceutical Society of Great Britain had barely got into its stride when one of its members, a man of some note in his day, started a long and inconclusive correspondence in the Journal on the question, "Are We Progressing?" In his view, the Society had not benefited pharmacy, which was then steadily going from bad to worse—and was not likely long to survive. This portentous prognosis was made more than two generations ago, and pharmacy is still, like Charles the Second, taking an unconscionable time in dying. On the contrary, after the fashion of annuitants, it goes on living lustily, when, according to all the wiseacres, it ought to consider itself dead and done for, if not completely damned. Now what is the burden of this lamentation over the decadence of pharmacy, which raises its voice and weeps in season and out of season? First and foremost, it is that pharmacy is no longer what it once was. The retort to this is that given by *Punch* to its gainsayers: It never was. The notion that before 1841 or 1868, pharmacy pure and undefiled flourished throughout the land is a delusion. There were in those periods a small minority of chemists and druggists, highly educated and scientific men, who carried on business on strictly professional lines; but the majority of those who were nominally their professional brethren, did a much more mixed business than the average chemist of the present day, and if, even yet, there is little dispensing for the chemist, there was less then. Generally speaking, it can be proved to a demonstration that in regard to both personality and practice the contemporary chemist and druggist is an advance upon his immediate predecessors, and that economically and socially he is also better off.

The eulogists of the days that are gone will naturally challenge this statement and point to what they conceive to be the incontestable evidences of the decline and demoralization of pharmacy. They will ask: What has become of the "art and mastery of pharmacy" in an age when the making of official and unofficial galenicals has passed from the laboratory of the retail shop to that of the manufacturer, when even the packing of ordinary commodities of the chemist's trade is done for him by outsiders, and when

such dispensing as he gets is of the most rudimentary kind, or is mainly for proprietaries, and when generally he is being degraded to the level of a mere distributor of the manufactured and advertised article? These counts taken *seriatim* seem collectively to constitute a strong case for the superiority of the pharmacy of the past; but critical examination of it will put a different complexion on the matter.

Change is the law of life. When change ceases life ends, for change in what was once living is dissolution. The nineteenth century, and the present one, so far, have been periods of profound and pervasive mutation and transmutation throughout the whole complicated fabric of human civilization. It is, of course, an open question whether all change makes for higher civilization, but without change there can be no progress, and pharmacy, in common with other professions, must move with the times, or it will fall out and perish by the way. Within living memory there has been a revolution as well as an evolution in the nature and form of medicaments. The old empirical methods which had to answer half a century ago have been superseded by scientific technique, and the progressive extension of the principle of the standardization of potent drugs, and more stringent requirements for the purity of many other substances and preparations used in medicine, manufacture on the large scale, the high duty on alcohol, and the practical difficulty of recovering small quantities of it when used in a shop laboratory, have all conspired to make it almost impracticable for the ordinary chemist to continue to be his own manufacturer. But do these results and the tendencies of which they are the expression mean that before long there will be no room for the pharmacist save as a mechanical vendor? In other words, that there is no future for pharmacy as such?

When any living organism fails to adapt itself to a changing environment, it perishes. The environment of pharmacy has changed, is changing, and will go on changing. If pharmacy is to survive—and the world cannot dispense with it for a long time to come—there must be continuous adjustment between its internal and external relations. Special scientific and technical education and training will fit a certain number of pharmacists to assume distinctive functions and perform extra-pharmaceutical services;

but for the main body of members of the profession, who are, and must be, shopkeepers, there is not, and cannot be enough professional practice to go round. In some quarters limitation of pharmacies to population is cried up as a panacea for the overcrowding of the business, but it has not proved so in the Continental countries where it exists, and even if there were an effective demand for such a restriction, our Legislature would not be likely to grant it. What is urgently and equitably called for is a clearer legal definition and delimitation of the nature and scope of the business of a chemist and druggist, as a check upon the prevailing promiscuity in the sale of many drugs, and the reservation of the trade in them to the chemist and druggist. For the rest, if he is to improve his status, and advance his legitimate interests and claims, the pharmacist must realize more fully that whilst organization may not be an open sesame to an Aladdin's cavern, it is the most powerful lever for the protection and promotion of personal and collective rights and ideals. Even yet, pharmaceutical organization in this country, although certainly stronger and more efficient, and influential than in any other part of the world, sometimes lacks momentum, and misses the mark, because the energy of the whole mass cannot be drawn upon and utilized. Pharmacy has passed through and survived many an ordeal that threatened to be fatal to it—and it is not likely to succumb to any future attack—but if it is to maintain its power of resistance at the optimum level, organization and all that it means must be kept up to concert pitch.

From "The British Pharmaceutical Journal"

❁ Social News ❁

KAPPA PSI NEWS

The Kappa Psi Fraternity House was a scene of a very happy social gathering of the Alumni, actives and pledges on October 14th. Many out of the city graduates as well as a goodly number of city men were present. Mr. and Mrs. Chamberlin and Dr. and Mrs. Bacon acted as chaperons.

Brother Nelson Scribner now has a baby daughter to look after. Ask him for the smokes.

Brother Walters is now in Akron, Ohio, working with Brother Donahue. They recently announced the opening of a new Drug Store in the Ohio Building. They have the best wishes of the Fraternity.

Brothers Hickernell and Streng are located at the Cleveland City Hospital. We understand that Streng is now teaching a class of nurses. More power to him.

Brother Brooks has returned from his trip abroad. He says that many of his old girls could not be found but that there were many others to take their places.

Brother Smith is now working in the prescription department of Miller's Fenway Store.

Brother Bannon recently joined Brother Krewson in the employment of Strong Cobb & Co. Bannon was formerly at Lakeside Hospital.

Brothers Geuss, Jewell and Cullinan have been occasional visitors at the Chapter House.

The members of Beta-Beta Chapter of Kappa Psi Fraternity wish to take this means of expressing their sincerest and kindest wishes for a Very Merry Christmas and a Happy New Year to the Alumni, Faculty and Students of the school. A similar expression is made to the Editor and Staff of the Reserve Pharmacon for the work which they are doing.

Brother Wetzel is recovering from a broken leg which he received while doing some repair work in his drug store in Amherst, Ohio.

Misfortune recently visited the home of one of our students when the father of Robert Fitch dropped dead on his way to work. The entire school extends their sympathy to the family.

Robert Porter is laboratory assistant to Dr. Bacon in Pharmacognosy.

PHI DELTA CHI NEWS

Alpha Alpha of Phi Delta Chi is making active plans to entertain the Fraternity when their annual convention will be held in Cleveland, Ohio, February 9th, 10th, and 11th, 1928, at the Statler Hotel. Walter F. Wargell has been in charge of the arrangements and has been working steadily ever since the convention last year, held at Memphis, Tenn., to put this one over with a bang. Several alumni located within a

fairly large radius of Cleveland are planning on attending so that the convention should be a well attended affair.

Brother Thomas H. Highland, Ph. G., '26, who has been living at the house, 11511 Mayfield rd., went to Canton, Ohio, Wednesday, Dec. 7, to accept a position at the Roth & Hug Arcade Store, the same firm for which Brother Henry K. Kumpf, Ph. G., '26, wields the spatula.

On Monday, November 21st, the actives and pledges of the chapter got together for a joint pledge and active meeting. Dean Spease and Professor Davy were over and gave us some good pointers to boost our grades and general work. Late in the evening refreshments were served by the Steward Carl J. Shane and his chief sidekick, Earl T. Cook. The meeting did much to improve the fraternal feeling between the actives and pledges and we hope to make them a regular part of our school year.

Alpha Alpha Chapter of Phi Delta Chi held its annual pledge dance Friday, December 16th at the Women's Club, 3535 Euclid Ave. The party was chaperoned by Dean and Mrs. Spease, and Dr. and Mrs. Bacon, Mr. and Mrs. Davy, and Mr. and Mrs. Hosler. Dr. Bacon, who is a new instructor at the school, and his wife were introduced to the pledge and active chapter by Mr. Walter F. Wargell.

The entertainment committee, R. Bennett Gilbert, Carl J. Shane, Paul S. Steidl and G. Richard Koch, deserves much credit for the good time enjoyed by all.

The music was furnished by Helen Mader and her "Bluejackets". The fraternity colors, dregs of wine and old gold formed a pleasing combination on the programs, while the favors, small hand engraved brooches, bearing the fraternity crest, provided a very enjoyable surprise.

Several out-of-town alumni were present including Thomas H. Highland and Henry Kumpf of Canton, Ohio; Elmer Carl Hudson of Louisville, Ohio; George W. Brown of Youngstown, Ohio, Paul A. Gromol of Meadville, Pa. Brother Busha, XI, of Lorain, Ohio, and Brother Rhodes, Alpha, of Youngstown, Ohio, were also included in the list of out of town guests.

The pledges, Fenton St. John, Clarence Spiece, Nelson Schroeder, George Breuhler, Victor Van Campen, Robert Kumpf, Walter Gerlach, Lon Lyman, Laddie Sedely, Ed-

gar Cantlon, Winston McNamara, Adelbert Patronsky, Aloysius Kuchta, in whose honor the dance was given can feel reasonably sure that they have received a real send-off on their fraternity career.

ALPHA ZETA OMEGA

The A. Z. O. Frat. opened the current school year with the pledging of nine men: A. Fine, E. Gross, J. Weinstein, M. Reimer, M. Greenblatt, . Dworkin, . Goldfort, .Saginer, Israel.

The first three are juniors and well known to the school beause of their stellar scholastic work during the past 2 years. E. Gross, formerly of Michigan, and Saginer are sophomores. The others are first year men. Much is expected of these men as they are all taking an active interest in both fraternity work and in their school-work. Another factor favoring them is that they are all imbued with the proper fraternity spirit.

The officers elected for this year were R. Scott, Pres., 2nd term; M. Harris, Sec.; M. Schoenberg, Treas.

Under their management the frat. has been making very favorable progress in all lines of endeavor. Its social affairs are looked forward to by both frat. members and faculty members, as in the past each affair has had remarkable success, and this year, we are sure, will be no exception. The frat. is firmly established financially and as weeks pass into months and months into years, it will establish itself still more firmly. A rather novel innovation has been introduced this year and although still in its experimental stage shows indications of being a tremendous success. A program committee consisting of M. Cohen, pharmacy graduate and Adelbert pre med. student, M. Weintraub, Ph. G., and C. Korn, Ph. G., was appointed and under the direction of these men the plan is being carried out. A 30 minute speech is given at each meeting by one of the members especially appointed and an outside speaker is occasionally called in.

Subjects of varied character such as literature, science, religion are being planned by the committee.

The study of English Literature is the first topic and five lectures have already

been given on this interesting subject. The lectures have covered the period between the Norman Conquest and up to and through the Elizabethan Drama. They have been very interesting and educational and have driven the members to the libraries in order that they might delve a little deeper into the subject, as the talkers being limited to 30 minutes only a very brief outline or resume of their period covering only the most salient and outstanding points can be given. The lecture on the Eliz. Drama covered by an outside speaker, Mr. Axelrod, was especially interesting and aroused a great deal of comment and spirited discussion. Similar talks will be given on all subjects selected for future study.

Many will ask "of what value is this to a pharmacist and of what benefit is it to the fraternity?" No doubt, we have all heard at some time or other that professional men are not educated; that is in the true sense of the word. Their knowledge is limited and as a result they are able only to discuss matters pertaining to their profession and are at a loss when such subjects as literature, art, drama, etc., are brought to the fore. It is to overcome this deficiency that these talks are being given and we are certain we will meet with success in this undertaking.

Business

The annual winter convention is being held in Philadelphia this year on January 2-3. The three delegates chosen for representation of the Theta Chapter are M. Cohen, L. Gressel, and J. Franklin

Social Activities

The social season opened with a "get acquainted" Smoker at Hotel Cleveland. Ten new men as well as the whole chapter attended and speeches were made by Dr. Katz, Honorary Member, R. Scott, L. Gressel and J. Silberblatt.

The next function was the "Pledge Dance" at the Park Lane Villa on the 28th of October. It was voted a capital success by all members and was especially praised by the faculty members present, namely Dean and Mrs. Spease, Dr. and Mrs. Bacon, Mr. and Mrs. Hosler, Miss Allen and Miss Krivan. Music was furnished by the "Bedford Glen Orchestra".

A Theater Party is being sponsored by J. Baskind, President of the Entertainment Committee, to be held on New Year's Eve. Fifteen couples plan to attend.

A formal dinner and dance will be given during the month of February to welcome into the frat. pledges initiated on Jan. 20, 1928.

Personals

R. Green is engaged to Miss Silk.

N. Wine and Co. have gone into the Citrate of Magnesia business and now have 115 stores using their product. They've named the concern The Philadelphia Magnesia Co.

Alex Harris cops the highest mark in the Assistants' Exam.

Sam. Krenitz is doing well at the W. R. U. Medical School and his brother Phil is getting along fine at the Toledo Pharmacy School.

ALPHA PHI DELTA

The chapter is enthusiastic over the prospects of the Annual Christmas Formal. Many of the out of town brothers will be home and guests are expected from the neighboring chapters.

The Fraternity intramural basket ball team is practising hard in preparation for a strenuous season. Brother La Riche is manager and Specuzza and Jioia of Pharmacy school will probably be luminaries.

Alfred Zarlengo of Pharmacy was formally initiated last week along with two men from the Case chapter.

Brother Maddalena, who is national Vice President will make a visit to both the Ohio State and Pittsburgh chapters during the holidays. We hope he doesn't stray too far and that he will be back in time for the renewal of school.

Father's Day was observed on December 4th with a large group of the fathers present for the occasion. The time was spent in card playing and other forms of entertainment. Brother Paterno of New York was a visitor during that week.

PHI KAPPA OMICRON

The Phi Kappa Omicron Sorority held their annual pledge dinner at Hotel Westlake on October 22, in honor of the Pledges: Ethel Kolsvary, Ruth Kotershall.

Mrs. Harris, honorary member, was present. The Alumnae present were Esther Tyler, Ethel Albrecht, Helen Kadel, Annette Lutheran.



Sports



A SPORTS EDITORIAL

Last year the Pharmacy School, for the first time in years, was in the spotlight in athletics. The basketball team won the championship of the Theta league for the second successive time. It displayed a fine combination of team workers, and brought the only two cups ever won for the Pharmacy School.

The school's indoor baseball team made a fine showing in the intramural league. They were runners-up for the cup and lost only because of lack of substitutes who were needed at the end of the year. The team went to Detroit and showed an undying spirit by coming from behind in the last inning to defeat the Parke Davis ten. In addition to these noteworthy feats, the last year's Frosh won all their games played. They defeated the Upperclassmen and also drubbed representatives from Adelbert.

These accomplishments of the past year have tended to increase the interest in Pharmacy School sports. The student body has taken an active interest in turning out candidates for the various teams. The student Council has supported the teams financially and otherwise. No doubt the faculty is also pleased with these showings made by the school.

The only remaining factor is that of support by the students. We should have more spectators and rooters at our games. It is obvious that better work can be put forth if support is forthcoming from the sidelines. We want everyone out if possible. Besides, a championship team deserves it. The spirit instilled in the players will also bring better results. So let's all turn out to see the games, and by doing so we will help our team win. This will all help to put Pharmacy School on the map.

PHARMACY BASKETBALL

With only Scott and Gayok remaining from last year's championship team, the

"Green Tornadoes" are back this year to repeat their performances of the past two years. It is almost always a difficult task to rebuild a team, and the Pharmacoons will undoubtedly find themselves no exception to the rule. However, with an ample supply of candidates on hand and an eager and determined effort on the part of the players, Coach Stockhaus and Manager Scott will round out a good team.

The first practise was held at the Gym Tuesday evening, November 29th. Fifteen men reported and although they displayed no midseason form, the strategy board feel confident and are pleased over the first showing. The men shot baskets and were put through a light scrimmage.

The squad will manage to practise at least once a week in order to round into form before the tournament officially opens. The Frosh have responded nobly to the first call by having ten representatives out for the squad.

We would also like to see more Upperclassmen out on the floor. The more men we have to pick from, the better the team will be.

The outfits have already been procured by Manager Scott who will distribute them to the eight men who make the squad. In addition, the Student Council will award sweaters and letters to the basketball team at the end of the year. This surely is worth trying for, so let's have even more response to the call for candidates.

CHECKER TOURNAMENT STARTED

The second annual Pharmacy School Checker tournament has started. The following rules are to be observed. Five minutes are allowed for each move. Spectators must not speak to contestants during games. The touch-move system is to be used, and two victories in three games are required to win a series.

The following men will arrange to play one another at their earliest conveniences: Cohen, Paver, Paley, Cole, Karner, Rozanski, Shreiner, Clinton, Graham, Geiger, and Spicuzza. The results are to be reported to Karner by February 1st.

Editorials

OUR PLATFORM

A FOUR YEAR MINIMUM
COURSE IN PHARMACY.
ABROGATION OF THE ASSIST-
ANT PHARMACIST.
DIFFERENTIATION BY LAW-
FUL ACT OF PRESCRIPTION
PHARMACIES AND NONETH-
ICAL PSEUDO-PHARMACIES.
OWNER-MANAGERSHIP OF ALL
PHARMACIES.
CURTAILING THE PROMISCU-
OUS SALE OF POTENT DRUGS
AS ASPIRIN, SANTONIN, ETC.
A MORE PRACTICAL CURRICU-
LUM OF COLLEGE STUDY.

In presenting a platform relative to the promulgation of Pharmacy as a Profession it is quite obvious that to include all those reforms embodied in such an undertaking would be neither wise nor possible, nor is this the place for it. Those of which we do make mention are of sufficient importance to warrant an immediate, definite action. We have purposely omitted reference to Prohibition and the clandestine dispensing of spirituous liquors via the back-door, primarily, because we think that Prohibition is still in the debateable stage and that the percentage of those in the profession who are conducting "speak-easys" is so low as to be negligible. The fellow who is engaged in such a nefarious business **always** was dishonest. He is the meat of the Sociologists and Psychologists not the concern of Pharmacists.

After the manner of a Barker, our first big number, ladies and gentlemen, is with reference to a compulsory four-year course in Pharmacy. That the idea has found favor with some of the higher potentates of galenicals can best be answered by the fact that such a course is prevalent in most of the larger schools and universities, although it is to be regretted that it is compulsory in only two or three of them. The advantages of such a course are many. To the school displaying such a course it brings students

not only eager to become Pharmacists but students eager to become educated pharmacists, in a word to become executives. The importance of the need of executives in the field of Pharmacy as the present time can hardly be overestimated. We need more men who are able to think, speak and talk well; men who are zealous of the heritage of pharmacy and who with stamina can maintain their convictions, men to whom the sustenance of the "body politic" in Pharmacy comes as easy as their own integrity, men educated beyond the point of truculent verbiage and "Drug-Store" rustication. Upon such men lies the hope of Pharmacy. Such men can be produced but not within the scope of two or three year curriculum, hardly is it possible within four years. Is Pharmacy in its embodiment of study lesser in quantity and quality of intellectual fixations than its allied brethren Medicine and Dentistry? And have not both of the latter courses of six, seven or eight years duration? Is there anyone, excepting not even the physician, who in addition to his most thorough knowledge of his vocation and profession shall be as "full of wise saws and modern instances" as the Pharmacist? Culture, poise, the niceties of manner and dress, ability and success can only come through rigorous training. Let us by all means have a compulsory four year course in Pharmacy.

□ Alumni □

MR. JOSEPH ALBRECHT

Mr. Joseph Albrecht, well known Cleveland druggist, is one of the oldest and most prominent alumnus of the School of Pharmacy. He was born in Sandusky April 21, 1870, where he received his earlier education. He served his apprenticeship with J. C. Hauser at Sandusky and with E. Peter-silge and J. J. Weiler of Cleveland.

He then entered the Cleveland School of Pharmacy, which was located in the old city hall at that time, and was graduated in 1889. He passed the state board examination the following year.

Mr. Albrecht established a drug store at Central and E. 71st St which proved to be successful, and later he purchased another

store at 105th St. and Wade Park Ave. In 1924 he retired from business and having already disposed of his Central Ave. store,



JOSEPH ALBRECHT

turned the 105th St. store over to his son Mr. A. A. Albrecht, who is also one of our graduates.

Mr. Albrecht is the father of eight children, four of whom are registered pharmacists, two boys and two girls, all graduates of our School of Pharmacy. Miss Ethel Albrecht is employed at the store conducted by A. A. Albrecht, while Irene M. Albrecht, Ph. G. of '17, who is now Mrs. G. M. Cunningham, lives in Detroit. Another son Earl Albrecht is managing one of Marshall's stores.

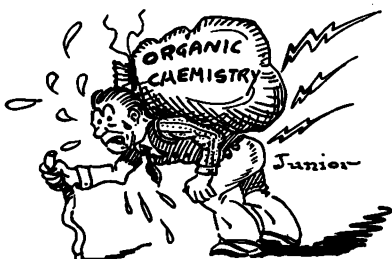
In addition to taking an active part in many Pharmacy activities, Mr. Albrecht has found time to interest himself in fishing, baseball, and other forms of athletics, and is president of the Quinnebog Fishing Club. Though retired, he still takes an active interest in his son's store and has often helped students employed there to learn the finer points of Pharmacy.

OPEN LETTER

Editor of the PHARMACON,

Allow me to congratulate Mr. Myer Karner for his open letter which appeared in the last issue of the Pharmacon, inasmuch as he was a pioneer in this column. However, I disagree with him on several of his statements.

To say that the curriculum of the School



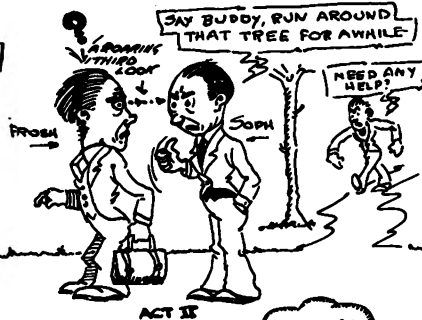
"A HEAVY LOAD"

BALL: "WHY ARE OUR WEEKLY ASSEMBLIES LIKE THE SAHARA DESERT?"
CAAIN: "ASK ME A NOTHER!"
BALL: "THEY'RE BOTH DRY!"

PRACTICAL EXPERIENCE
IN MODERN PHARMACY



ACT I



ACT II



ACT III - AND - CURTAIN



VERY NOTICEABLE IN 1927



- IT HAPPENED AT LAKESIDE HOSPITAL -



OUR GIRL
STUDENTS SHAKE
A MEAN PESTLE!



A SUGGESTION FOR 1928
FRESHMAN INITIATION -
"BLIND-MAN'S-BUFF"



"Boo!"

THE OLD PHARMACY SHACK IS IN BACK OF THIS BILLBOARD
WE FELT ASHAMED TO DRAW A PICTURE OF OUR PREHISTORIC STRUCTURE IN FULL VIEW - SO WE PUT THIS BILLBOARD IN FRONT OF IT.
THE YEAR 1927 WALKED OFF, BUT FORGOT HIS SOUVENIR. - LET'S HOPE 1928 SURPRISES THE STUDENTS

J. STARK

"AS THE YEAR 1927 PASSED ON"!

of Pharmacy is inadequate may be true in that we need more courses to care for our twentieth century specialization, but Mr. Karner's suggestion that regular mathematics be dropped and that Economics be substituted by a course in Salesmanship is almost too sharp a change. Mr. Karner states that the course in Economics teaches the rudiments of business only as they are necessary on a large scale. From personal contact with other students who have studied Economics, I have learned that the course was designed to give and explain the laws governing business conditions, and that these laws are applicable to either large or small establishments. Economics were never intended to teach store management; furthermore, that is a phase of business which I think must be learned by actual experience, due to varying conditions over the city. No one teacher in the university could teach a course which would teach every student salesmanship because of the different temperaments; that too, I think, must be acquired by actual experience. I am speaking, in this instance of Freshman Economics as taught at Adelbert and I will admit that all of my information is second hand, since I did not take the course, so that I really owe Mr. Karner an apology if I have made any rash statements about a subject of which I know so little.

However, his statement that mathematics should be dropped is decidedly wrong. Instead of being an optional subject, I would strongly advise that it be made a required course. If Pharmacy is or is to be a profession, why not make it so, and not just a business. I honestly believe that the majority of subjects can be linked with the fundamentals of mathematics. It is quite essential as part of a professional man's training, more so than Economics, because, after all, upon what is Economics based, and upon what authority are business laws formulated? From figures compiled by expert mathematicians.

As for show card writing and window trimming, it is a lamentable fact that the knack does not lie latent in all of us. However, the suggestion is a good one and I am sure a one or two hour course could be arranged with the art school to care for those possessing ability as artists or window trimmers.

My suggestion for advancing the stand-

ing of the School of Pharmacy is a pre-pharmacy course of 2 years Junior College work. Since, of course, the Junior College idea is only a recent one, the suggestion is open to much discussion both pro and con, but the time is coming, when pre-pharmacy work will be as necessary to the embryo pharmacist is pre-medical work is to the doctor. Too many profitable and interesting sidelines have slipped away from the pharmacists of today simply because they were not prepared to properly handle them. Hence, the need of more education. With the advent of our present course in Retail Pharmacy, and the proposed course in Cosmetics, the trend toward specialization has started, necessitating a freedom for those students from any courses taught in a Liberal Arts College. Yet those courses are necessary, therefore let us have Junior College work in order that mathematics, economics, languages and any other assigned courses will be disposed of before the student enters upon his pharmacy work.

Respectfully,

LAWRENCE H. BALDINGER.

☐ **Extracts** ☐

HOMEOPATHIC PHARMACY

Few of the students of the School of Pharmacy, clearly understand the term Homeopathy, nor have many of them ever had the good fortune to visit a homeopathic pharmacy. Such an establishment exists here in Cleveland in the heart of the downtown district, located in Room 207 Erie Building, at the corner of Prospect and Ninth Streets.

The Pharmacy was instituted by Dr. John Peake Sobey and is known as Sobey's Homeopathic Pharmacy. Dr. Sobey was graduated in 1877 from the Cleveland Homeopathic Hospital, then located on the present site of the Huron Road Hospital, and, as was the custom at that time, in addition to caring for his medical practice, conducted his own manufacturing and wholesale pharmacy. He was at one time a lecturer in Homeopathic Pharmacy at the School of Pharmacy, long before it was moved to the campus of Western Reserve University. Dr. Sobey has retired and now

lives at 1842 Burnette Ave., E. C. He is no longer connected with the pharmacy, at least is taking no active part in its management, but it still carries his name and is now managed by Mr. Ned S. Bristol, who claims the distinction of conducting the only pharmacy of its kind in the city, also in the state, since he manufactures his own products, whereas the other homeopathic pharmacies in the state, two or three of which are located in Cincinnati, do only a retail and wholesale business.

Mr. Bristol is not a graduate of a Pharmacy school, but has received his pharmaceutical education in the school of hard knocks. He left school after finishing his Junior year in High School and has worked with drugs ever since so that his training has been slowly but thoroughly acquired. Mr. Bristol is a registered pharmacist in the State of Ohio, having passed the board, long before the ruling went into effect requiring a college degree as a requisite to pass the state board.

To describe the feeling, occasioned by the contrast offered between this pharmacy and one of the modern type is indeed difficult. Imagine being carried back fifty or seventy-five years by merely walking over the threshold of the shop. Were it not for the electric lights, the typewriter, the purr of a small motor in the manufacturing laboratory, and the occasional slamming of an elevator door in the outside hall, one could easily imagine himself in an old apothecary's shop during the 19th century.

The atmosphere of the place is strictly that of a pharmacy. A small window display, not over 6 feet square, faces the outside hall, and is the only indication, in addition to a small sign on the door, that such an establishment exists. The display is centered on the bust of some eminent doctor or pharmacist, probably, that of Dr. Samuel Hahnemann, the founder of Homeopathy.

The interior of the shop is divided into 2 parts; a small office or store, and the manufacturing laboratory, which has been roughly divided into a laboratory proper and a storeroom. The office contains a small counter, a glass case holding books, some of which are very old, others comparatively recent, all pertaining to pharmacy or medicine. Over in one corner Mr. Bristol has his desk, which is chock full of books and notes, once belonging to Dr. Sobey. One book in

particular which Mr. Bristol has in his possession is a text of "American Medicinal Plants" by Dr. C. F. Millsbaugh, written primarily for homeopathic pharmacists and physicians to enable them to select their crude drugs from local sources, thereby procuring fresh drugs for tinctures, one of the requirements of homeopathic pharmacy. This book is at least 30 or 40 years old and when first published cost \$40. All the plates are vividly illustrated in colors and make the identification and selection of the growing medicinal plants an easy task. The book is indeed a rarity and would make an excellent adjunct to any botanist's library.

Passing on into the next room, a more familiar atmosphere strikes the pharmacist of the new era, since it is the storeroom for the manufactured products and resembles very much the prescription counter and shelves of a modern drug store.

The manufacturing laboratory is the most interesting part of the shop. Just inside the door we see a whole barrel of milk sugar, used in making triturations. A more modern drug store wouldn't use a barrel of milk sugar in years, yet this amount only lasts a short time in this pharmacy. Along one wall are tiers of shelves holding crude dried drugs, which are used in making tinctures when the fresh undried product cannot be obtained. On the side of the room is a tablet machine and an ingenious mechanical "triturator"—if such a word may be coined, very crude, yet efficient to the nth degree. This machine consists of a huge mortar, about 20 inches in diameter across the top, and fully an inch thick, firmly mounted on a revolving table or disc. As the mortar revolves, a pestle, corresponding in size with the mortar, is slowly drawn backwards and forwards over the trituration in the mortar, while a small steel scraper, fastened to the machine gently removes any of the product which is pushed up the side of the mortar by the heavy pestle. The small tablet machine is run by a small motor, which also furnishes the power for the mortar and pestle arrangement.

A set of sieves of various sizes, used in making granulations, is stored close to a small laboratory table. With these and the mortar arrangement, Mr. Bristol is able to obtain a very finely divided trituration and granulation, another basic re-

quirement of homeopathic pharmacy. The milk sugar used is somewhat coarse and in the process of trituration, the crude drug is finely divided and evenly distributed, while at the same time the milk sugar is reduced to a fine powder.

Homeopathy was founded by Dr. Samuel Hahnemann, a German physician, born in Meisen, Upper Saxony, on April 10, 1755. It was Hahnemann who formulated the system of therapeutics—*Similia similibus curantur*—"like cures like," which is the basis of homeopathic medicine. He first announced the system about 1796. From his experiments with drugs, he became convinced that many would produce symptoms similar to those produced by diseases, and that the drugs producing these symptoms resembling these of the diseases, were remedies for those diseases. He gave two propositions: 1. When two dissimilar abnormal irritations act simultaneously on the body, the weaker irritation will be suppressed or suspended by the stronger. 2. When two similar irritations act on the body, the weaker irritation with its effects will be completely extinguished by the stronger. From these he drew the conclusion that "in order to be able to cure, we shall have to oppose the existing irritation with a drug causing the same irritation in the body. From this came the doctrine that "like cures like."

Cleanliness is stressed by homeopathic pharmacy, and the most conscientious care is required in handling drugs of different kinds, and in keeping them from contact with each other.

A brief definition of the subjects, according to the tenets of Homeopathy may be of interest. Drugs are defined as substances which have the power of disturbing the health of a living organism. Each drug is capable of exerting this power in a manner peculiar to itself, and therein differs and may be distinguished from other drugs in their tests upon the normal organism. The toxic or pathogenic property or power of drugs under certain conditions known to the physician, becomes a curative agent in disease. Hence, substances which are primarily toxic or pathogenic are secondarily medicines when prescribed in disease, and prepared for that purpose by the pharmacist.

All products used in homeopathic pharmacy are of a 10 per cent dilution, or are in

a dilution to the second or third power of ten. For instance, in the case of ipecac, the tincture as made by the homeopathic pharmacist contains 10 per cent of drug. It is designated by 1 X. If one part of this is diluted up to 10 parts with alcohol we have a 1/100 tincture which is designated by 2 X. The same thing holds true with the triturations, so that we have tablets and triturations labeled 2 X, 3 X, 4 X, meaning 1/100, 1/1000, 1/10000, respectively.

To give a complete history and report of Homeopathy would take too much space and time. However, any textbook or reference book on pharmacy will give a complete history of homeopathic pharmacy. Reference should be made to *The Homeopathic Pharmacopoeia of the United States*, which is issued by the American Institute of Homeopathy, and which is on file at the library.

Mr. Bristol extends to the pharmacy school students a cordial invitation to visit his pharmacy in the Erie Building and I am sure will do all in his power to make one's visit well worth while.

NOTE—While the "Pharmacoon" is by no means in accord with homeopathic medicine it is more than glad to print the above concerning Dr. Sobey and his lifework.

PHARMACOLOGY AND TOXICOLOGY OF SOME ALKALOIDS AND GLUCOSIDES DIONIN

Ethylmorphine Hydrochloride.—White, faintly bitter, neutral powder. Sol.: 8 water, 22 alcohol. —Med. Action: Sedative; Antispasmodic; Analgesic; Ocular Lymphagogue. —Uses: Intern., chronic bronchitis, to abort "coryza," emphysema, laryngitis, influenza, pneumonia, whooping-cough, gynecological operations, asthma, morphinomania, painful affections, insomnia due to pain; extern., corneal affections, glaucoma, interstitial keratitis, iritis, opacity of vitreous humor. —Dose: $\frac{1}{4}$ -1 grain (0.015-0.06 Gm.)—Injection (in morphinism): 1-2 grains (0.06-0.12 Gm.) per dose, 3-15 grains (0.2-1 Gm.) per day.—Extern.: In eye diseases, 1-2 drops of a 5-10% solution, or pure; in gynecol., $\frac{3}{8}$ grain (0.04 Gm.) in vaginal suppository.—Max. Dose (except in morphinism): $\frac{1}{4}$ grain (0.075 Gm.) single, 5 grains (0.3 Gm.) p. day.

Pharmacology

The pharmacology of dionin is practically the same as that of morphine. It differs in some few points, however, as follows:

Dionin does not raise the CO_2 threshold as much as does morphine, and, therefore, is less effective in dyspnea. Applied to the eye it does not contract the pupil (morphine does), but a strong solution of the powder causes burning pain, hyperemia, and acute edema of the lids and conjunctiva, which disappears without leaving any ill effects, and which action has proved useful in ophthalmology for removing old inflammatory products (morphine has no such action). In all other respects dionin stands midway between morphine and codeine.

DUBOISINE SULPHATE

Yellowish very deliquescent powd.—Sol.: Water, alcohol.—Med. Action: Hypnotic; Sedative; Mydriatic.—Uses: Principally as mydriatic, much stronger than atropine; also in mental diseases, usually hypodermically.—Dose: 1/300-1/60 grain (0.0002-0.001 Gm.).—Extern. in 0.2-0.8% solut.—Antidotes: Emetics, stomach siphon, pilocarpine.—Incompatibles: As of Atropine.

Pharmacology and Toxicology

The pharmacology and toxicology of duboisine are exactly the same as those of atropine (which see). The duboisine, however, is stated to be much more active as a mydriatic, the effect setting in more rapidly and being more persistent. It is also stated to be almost 10 times as powerful as atropine in its action on the circulation and vagus nerves, as also in stimulant action on the cerebral center, splanchnic nerve, intestinal ganglia, respiration, and temperature.

ASPIDOSPERMINE—Amorphous

Brown-yellow powder; bitter taste. Sol.: Alcohol, ether, chloroform; slightly in water.—Med. Action: Respiratory Stimulant; Antispasmodic.—Uses: Dyspnea, bronchial asthma, spasmodic croup, emphysema, phthisis, edema, catarrhal pneumonia, pleuritis, nervous and cardiac asthma, and valvular defects. "The digitalis of the lungs."—Dose: 1-2 grains (0.06-0.12 Gm.).—Max. Dose: 3 grains (0.2 Gm.).

Pharmacology

Action on:

Central Nervous System.—This is first stimulated there are nausea, salivation, increased secretion of mucus in respiratory tract, alternately rapid and slow pulse, and respiratory changes), then depressed; the chief seat of action appears to be the medul-

lary centers and the spinal cord (there are convulsions and increased reflex excitability), though the basal ganglia may also be involved more or less. Large doses paralyze the vagus, sympathetic and motor endings (like nicotine), death occurring by paralysis of respiratory center (the heart continuing to contract for some time longer), when motor nerves still respond to stimulation.

Respiration.—Moderate doses increase the respiration, which becomes quicker and deeper (from central nervous stimulation), but after lethal doses respiration becomes slow and weak and finally ceases (paralysis of respiratory center), though periodic respiration often occurs before final standstill, a series of deep dyspneic movements alternating with several shallow, insufficient ones.

Circulation.—This is indirectly affected by the nausea. The blood pressure is reduced, and large doses may slow the heart (depression of cardiac muscles). The drug also favors the transfer of oxygen to the tissues through the blood corpuscles.

Secretions.—Salivation is increased, and so also is the secretion of mucus in the respiratory tract, and occasionally the urine; sometimes there is also diarrhea.—Merck's Report, Oct. 27.

WILL THE CHAIN STORES GOBBLE UP ALL THE BUSINESS OF THE COUNTRY?

We are in the midst of the greatest changes in distribution and production that the world has ever seen. The chain-store movement is going forward by leaps and bounds. Until now a good part of the country's business has been done by small retail stores, buying in small quantities, often paying three or four profits to intermediaries. They are now in direct competition with the chain stores, who sell enormous volumes of goods which they either produce themselves or buy direct from the producer, and who in addition sell under standardized methods.

The great and rapid growth of the chain stores is reflected in the enormous volume of business they do. The sales of several of the leading chain systems in 1926 were as follows:

Gt. Atl. & Pac. Tea Co.....	Grocery	11,000	\$352,093,342
Kroger Groc. Co.....	Grocery	3,019	146,051,000
F. W. Woolworth Co.....	5 & 10c	1,423	253,639,000
			(1,480 stores)
S. S. Kresge Co.....	5 & 10c	304	119,218,007
			(367 stores)
U. S. Cigar Store Co.....	Cigar	1,208	74,208,878
Liggett's.....	Drug	341	53,356,195
Childs Co.....	Lunch	108	25,978,421
G. R. Kinney Co.....	Shoes	253	18,087,888
Loft, Inc.....	Candy	34	8,399,768
J. C. Penney Co.....	Dry goods	676	115,682,738
Loew's Inc.....	Theatre	107	59,152,476

The list could be extended indefinitely. There are chains in most of the lines of wanted goods. Some are just beginning. There is hardly a day that the papers do not carry some new item reporting the growth of the chain-store movement, either some new line opened or an increase in the business of existing lines.

In addition to economical buying and the best standard methods and practices, these chain stores have a further advantage in being able to advertise on a big scale at a negligible cost to each of their branches, a thing impossible to the small individual store.

The Associated Dry Goods Corporation owns the following department stores: James McCreery Co., New York; Hahne & Co., Newark; Stewart & Co., Baltimore; Wm. Hengerer Co., Buffalo; Powers Mercantile Co., Minneapolis; J. N. Adam & Co., Buffalo; Stewart Dry Goods Co., Louisville; and controls under part ownership C. C. G. Gunther's Sons and Lord & Taylor in New York.

On the Pacific Coast, B. F. Schlesinger & Sons, Inc., own department stores in Oakland, Portland, and Tacoma; and Hale Brothers Stores, Inc., a group of five department stores in San Francisco, San Jose, Oakland and Los Angeles.

In the Middle West, Scruggs-Vandervoort-Barney, of St. Louis, have acquired the S. L. White Co. store in Columbus, Ohio, and the Denver Dry Goods Company in Denver.

And in the South, the City Stores Company has taken over three well known stores in Birmingham, New Orleans and Memphis.

Just as the department store outdid the individual small store, so for the same reasons the chains of department stores will overshadow the present chains, for the department store chain will have the same advantages over the small store chain that the single department store has over the individual small stores. There are many ad-

vantages that a department store has which you are familiar with, that a small store cannot afford. For instance, its bulk size, bulk selling; its great power for advertising; its delivery, etc.

At present this movement into department store chains is only at its very beginning, and has not anywhere near reached its full growth in power. The formula that I have been forced to accept as a result of all my work, is a chain of department stores of which the similar departments of all the stores will themselves constitute a chain within the main group. For example, all the shoe departments will be operated as a chain of shoe stores, in charge of a merchandising manager who, in ability and experience, will be at least equal to the merchandise manager of a separate chain of shoe stores.

There is no department store or "single-line chain" that will be able in the long run to stand up against this class of organization. When this type of organization comes it will be able to sell cheaper and buy in larger quantities; it will help the manufacturers to eliminate their waste and so to sell cheaper than their competitors; it will make enormous total profits; and the more stores they have the better they can do the job.

The disappearance of individual stores wherever these chains have been most developed is portentous of what will happen to all such stores, as the chains continue to spread not only into new territory but into new lines. This danger, if there were no escape from it, would be very disheartening to retail merchants, because the chains have a very solid basis, buying so much more cheaply that they can often undersell the small stores by twenty-five per cent. These new chains of department stores have been developed to an important extent already, as the following array of samples will show:

R. H. Macy & Company, who sold over \$70,000,000 in their New York store alone in 1926, also own or control the stores of LaSalle & Koch, Toledo, and Davidson-Pazon-Stokes, Atlanta.

The May department stores now number five. Gimbel Brothers have great department stores in New York, Philadelphia, and Milwaukee, and own or control the two large Saks stores in New York, and Kaufmann & Baer, in Pittsburgh.

The National Department Stores chain numbered fifteen stores in 1925.

This means that in every city of fair size one department store of a chain of department stores such as I have been describing will be the conquering distributor—although the individual small stores can get together and organize for their own preservation, and do a relatively successful job.

Just imagine such a chain of department stores located in 100 cities. The total sales would easily run over a billion dollars. One hundred shoe departments in 100 of the biggest cities in the country would sell easily over \$50,000,000. And so on.

If these conclusions are sound, it means that the department-store chain will determine the fate not only of the individual department stores, but of the small individual retail stores also. You will bear in mind, of course, that the department store itself has no choice in the matter. Unless the department store meets the chain stores in the way I have indicated, somewhat briefly but I hope clearly, it will likewise be put out of business.

What is happening to the wholesaler and middleman?

It is my idea, as I have previously declared elsewhere, that they can become centers of chains comprised of their old customers.

Wholesalers and jobbers are now in touch with these individual stores. If they are farsighted enough to realize the possibilities of enormous increase in sales through organizing their present customers, and others, into chains, and to realize that a comparatively small percentage of profit per unit of sales to such chains will make a total profit much greater than they have ever earned before, they will be a better agency for the preservation of success of the individual small retail stores than any other now in sight.

The wholesalers and jobbers can start with the connections they now have with their customers—the individual stores; they can start with their established machinery for buying for many stores—the machinery that can most easily be expanded into the mass buying, on which the chains of stores must chiefly depend for success. **Chains; more chains.** That is the forecast for the future.—Filenem Merck's Report, Oct. 27.

PERMITTED FOOD COLORS

Hereafter the coal-tar dyes which will be accepted for certification, subject to the provisions of Food Inspection Decisions 76, 77, 106, 129, and 159 will be as follows:

Red shades:

- 80 Ponceau 3 R.
- 184 Amaranth.
- 773 Erythrosine.

Orange shades:

- 150 Orange 1.

Yellow shades:

- 10 Naphthol yellow S.
- 640 Tartrazine.
- 22 Yellow A B.
- 61 Yellow O B.

Green shades:

- 666 Guinea green B.
- 670 Light green S F yellowish.
- Fast green F C F. (p-hydroxy derivative of the sodium salt of alphanilic acid, C. I. 671)

Blue shades:

- 1180 Indigo disulfoacid

The numbers preceding the names refer to the numbers of the colors as listed in the Color Index published in 1924 by the Society of Dyers and Colorists of Great Britain.—Merck's Report, Oct. 27.

GROWTH IN BORIC ACID SOLUTIONS

The cause of turbidity observed in several stock solutions of H_3BO_3 has been traced to the growth of a species of *Torula*. The spores of this are probably derived from the air, since similar *Torula* were obtained by exposing petri dishes to the atmosphere of the pharmacy. On transferring these colonies to H_3BO_3 solution a similar turbidity and deposit was formed, which had the same micro-characters as the growths in the samples. This emphasizes the importance of using only fresh distilled water, recently boiled, for making the solution, and for preserving it in sterilized containers.—E. Wirk: Natl. Druggist.

TESTS FOR METHYL ALCOHOL AND ISOPROPYL ALCOHOL

stimulated (there are nausea, salivation, permanganate in acid solution to formaldehyde which affords with guaiacolsulphonic acid a violet color. It is more advisable however, to use potassium guaiacolsulphonate (0.04 Gm. in 10 cc. sulphuric acid), because

free guaiacol gives a similar reaction with acetaldehyde which is developed from ethyl alcohol by oxidation.

Isopropyl alcohol is oxidized with potassium dichromate in acid solution to acetone and the latter detected with sodium nitroprusside. Twenty cc. of 1 per cent. potassium dichromate solution are mixed with 1 cc. of sulphuric acid and then there are added 10 cc. of the liquid to be tested, which must be free from acetone. The mixture is then distilled over a small flame until 3 cc. of distillate are obtained in a test tube. The distillate is now floated on a mixture made from 2 cc. of a 5 per cent. sodium nitroprusside solution, 2 cc. of ammonia (sp. gr. 0.910) and 0.3 Gm. ammonium chloride. A purple-red ring at the contact surface of the two fluids indicates acetone and hence isopropyl alcohol.—Pharm. Ztg.

SYNERGISM OF MAGNESIUM SULPHATE AND MORPHINE

H. J. Sims has conducted experimental studies to determine the value of the alleged synergism of magnesium sulphate and morphine as affording a safe method of anesthesia by the intravenous route. He reviews the literature, presenting the conclusions of various observers, since the work of Meltzer and Auer in 1905. Gwathmey in 1921 took advantage of the relaxing effect of magnesium sulphate, by combining it with morphine sulphate in perfecting his method of colonic anesthesia. Both Gwathmey and F. Smythe reported favorable results from the use of morphine and magnesium sulphate for the relief of post-operative cases. Other observers have reported similarly. H. Beckman denies the existence of synergism; and Wesson and Howard are not convinced of the efficacy of the combination in question. Sims' experiments here under notice were carried out on dogs, and consisted of several procedures: the administration of either or both, magnesium sulphate and morphine sulphate hypodermically, in varying dosage, together with olive oil and ether combinations in differing percentages given by rectum. The author's conclusions are that magnesium sulphate in clinical cases given in large doses subcutaneously, possesses peculiar relaxing qualities, excessive doses being depressing and unsafe; it is a feeble

anodyne, and slow in action if given in physiological doses. Its relaxing effect is prolonged if morphine in combination be used, but magnesium sulphate does not increase the anodyne power of morphine, or, if so, it is ephemeral. Sims suggests that clinicians who wish to ascertain the relieving qualities of the combination try it in delirium tremens, mental confusion and excitement preceding uremia, renal colic, acute polyarthritis, and headaches from extreme hypertension. The paper quoted gives details of dosage and other necessary particulars.—Col. Medicine, 1926, xxiii, p. 212.

DIFFERENTIATION OF VERONAL, PROPONAL AND LUMINAL

The three hypnotics may be differentiated by their behavior toward fused alkali. In a small crucible melt about 1 Gm. of caustic alkali and sprinkle thereon a little powdered veronal; a sour, rancid odor becomes immediately apparent. Similar treatment with luminal yields a pleasant odor, like locust honey, which later becomes more pungent. With proponal the odor is at first spicy, then becomes pungent. A general color test for veronal, luminal and proponal consists in dissolving about 0.01 to 0.02 Gm. of the sample with a drop of salicylaldehyde in 1 to 2 cc. of alcohol, then cautiously adding strong sulphuric acid, whereupon the zone of contact becomes intensely red. The following color test differentiates luminal with certainty from both veronal and proponal: To 0.01-0.02 Gm. of the sample add 0.5 to 1 cc. formaldehyde and 4 cc. sulphuric acid, whereupon the mixture at room temperature gradually, on the steam bath within one minute, acquires a brilliant rose-red then cyclamen-red to wine-red color with luminal. With 0.05 Gm. of luminal the color becomes dark mulberry-red. With veronal and proponal only a yellowish color develops on the steam bath.—L. Ekkert: Pharm. Zentral.

Expressed Oil

1st boy—"My folks are going to send me to pharmacy school."

2nd boy—"I don't get along with mine, either."

Three ways to cure dandruff:

- 1—trans-atlantic flight
- 2—tell Dr. Bacon that you think his questions are puzzling.
- 3—buy bottle of Bald-Head Hair Tonic.
Drink it.

Allow us to tell you of James G. Neely,
He made a speech, but it sounded mealy;
He choked and he sputtered and up came
his spleen,
For he said, in his wrath, "I agree with the
Dean."

Are you a native Ohio-an!
No, I'm from Akron.
Shake brother, I'm a southerner, too.

Psychiatrist to druggist—"Sir, I find your
son to be very sub-normal. He appears to
have absolutely no desire to study quanti-
tative chemistry."

It's no disgrace to be poor; most drug-
gists never attract that much attention.

Prof. lecturing—"In certain parts of
Africa, cochineal is used to dye the beard
red."

Voice from back of room—"Do they give
out Xmas ties over there, too?"

Santy—"Have you heard the latest 'quant'
song?"

Clause—"All right, release it."

Santy—"Just another day wasted away."

How does that strike you, spake the thug,
as he clubbed his victim into insensibility.

CO—"Why is chemistry necessary to a
humorist?"

CO₂—"Because it acquaints him with the
silicide of life."

Oil—"Is he dumb?"

Can—"He's so dumb he thinks a circular
letter is O."

Science states the lesser cannot contain
the greater, but science evidently knows lit-
tle about a woman's shoe.

Some gasolines of high quality are made
by the cracking of hydro-carbons, but at
that, they are not what they are cracked up
to be.

Dr. Scott—"When one gets older his tis-
sues become less elastic and he becomes
weaker, and, etc."

Husky guffaws from the Sophs present.

Dr. Scott—"Ah, you have the feeling of
the immortality of youth."

BO—"Why does antiseptic powder get
red!"

Big Four—"I don't know, but if you were
knocked around, triturated, then pulverized,
you'd get red in the face, too."

Crazy—"Why is Pharmacog like a dope
fiend?"

Cat—"Because it's just one dose of drug
after another."

SUGGESTION TO SODA BOY

Maybe it'll only take another cake of
yeast to get that final raise.

"It isn't," remarked the druggist, "that I
object to the whole prohibition act; it's the
spirit that's in it."

LIFE'S PATHETIC FIGURES

The druggist's wife who married him to
enjoy the fruits of wealth.

Flapper to druggist—"Mr. Smith, I notice
your hand is in a sling; is it an infection?"

Tired druggist—"No, Miss, I've been wind-
ing toys all day."

EPITAPH

Here lies the body of Tommy O'Toole,
He went out for some spirits, but came
home with the Mule.

"What HO," cried the king, "Come
forth," I say, "Come forth."

But he came fifth and escaped pyorrhea.

Prof.—"Who knows anything about Co-
lombo?" Joe, you tell us."

Joe—"Oh yeah, Colombo sailed the ocean
wide."

"If I lose this case, my Xmas is ruined," remarked the young lawyer, as the bootlegger deposited 12 bottles on his desk.

A FAIRY STORY

Once upon a time there was a druggist who needed some professional advice, so he called on his competitor across the street.

Hallelujah, sound the trumpet; crash the cymbals, make a very loud noise—

A student, after waiting 2 years, 6 months, 4 days, and 3 hours, finally got a conference with the Dean.

Diary of a Pharmacy Student

Mon.—Spent all day trying to decide what Dr. Bacon means by his first question, in Pharmacog exam.

Tues.—Listened to lecture on Frigidaires.

Wed.—Waited from 8:30 to 5:10 at stock room window for percolator.

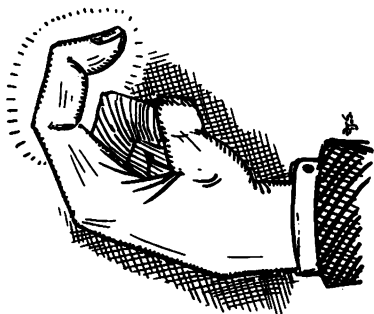
Thurs.—Saw Kappa Psi and Phi Delta Chi man shake hands with each other.

Fri.—Severely burned by steam pipe while resting in foyer of "lounging room."

Sat.—Learned to-day that professors are all kind, conscientious men with the burden of the student in their hearts.

Sun.—Gave devout thanks for what I have learned about pharmacy during the past week.

A New Disease



Drug clerks are usually the victims of this queer disease which is known as "telephone fingeritis." It is acquired by constantly searching the public telephones for return nickles. In addition to the distortion of the index finger, the first phalanx is either heavily calloused or worn off, as will be noted in the above reproduction of a drug clerk's affected finger.

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Bright young men and women students for special work.

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Vol. 2

April, 1928

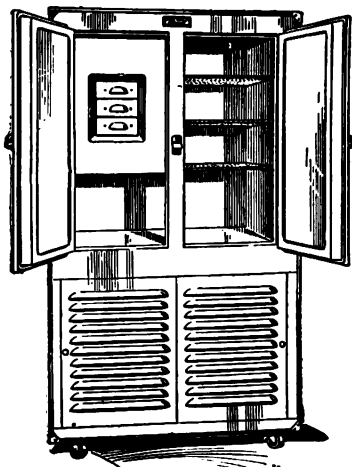
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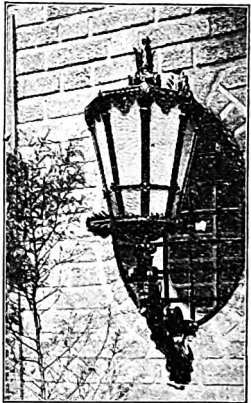
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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

The Pharmacy School

By Edward Spease, Dean

The broadminded and generous individuals who have outlined the future of Reserve seem to have decided that Cleveland should have a university that is commensurate with the growth and progress of Cleveland. To accomplish this purpose new schools and departments have been gradually added and since the advent of our new President we have seen direct unions and affiliations with almost every science, profession, art and educational unit that is needed to lay the foundation of a great university complete in all of its parts. An alumnus today may safely say to a prospective student, "Inquire at Reserve first."

The profession of Pharmacy, because of one of its phases, that of being forced to produce its materials for study, has always been retarded in its professional growth and the commercial side has thus become better known than the professional. It is, however, among the oldest of the professions, for the apothecary is indeed made mention of in Holy Writ, and its first school in America has already celebrated its centenary.

The School of Pharmacy of Western Reserve University is among the oldest of the Schools of the University, having had an affiliation with it for twenty years, since 1908, and having been an integral part of the university since 1918.

The School was founded by pharmacists of Cleveland in 1882 and is truly a Cleveland institution inasmuch as its inception was actually in City Hall and there its first lectures were held. It afterwards moved into a building owned by the Gas Company and known to Cleveland as the "Gas Office" and from there to Physicians and Surgeons School building at the corner of Fourteenth Street and Central Avenue. From this last location it moved to the campus in 1920 and was among the first schools to pass its probationary days in one of the homes of culture flanking Adelbert Road.

Its major activities, other than classes, have been in the home of Dr. M. M. Curtis and the office of the Dean has been for seven

years in the room that once held his library and doubtless the same thoughts have passed through his mind as coursed through that of the eminent philosopher when for years he was privileged to gaze upon the pile of black carbon used for heating Adelbert College across the way. But everything that is, is good, and by reason of this "atmosphere" we have developed the philosophy of contentment.

Suffice it to add that our class rooms were for a time in Adelbert College and for some years have been in Adelbert Hall, the old dormitory. It seems that we indeed have been privileged to be at least in touch with the places and spaces that have long been a source of inspiration to the alumni.

Educational standards in pharmacy have been slow to advance and it is sufficient to say that there have been real reasons for this that need not be enumerated here. It is important to record that the past ten years have viewed remarkable advances.

The old "short courses" of training which have produced many of the "shops" of today are all but out of existence. The minimum course permitted by the American Association of Colleges of Pharmacy, whose membership is made up of fifty of the leading Schools of Pharmacy, consists of three school years whose extent, both in clock hours and subjects studied, compared favorably with that of any high grade engineering school.

The major portion of the states require this minimum course by statute law and an organization of the examining boards of the several states known as the National Association of Boards of Pharmacy has done much to make the ideals of the profession become actual facts.

Many of our schools have adopted the four year course as the minimum. Our school still gives the three year course but twenty-five per cent of its students are enrolled in the four year course leading to the degree of Bachelor of Science.

Schools of Pharmacy are as yet undergraduate schools, accepting matriculants

after graduation from high school. There is, however, at least one year of liberal arts, exclusive of Chemistry, in the four year course. In our own School, as is the custom in university schools, this work is given in the same classes with the students of liberal arts.

The School here has interested itself more particularly in fitting graduates for the professional side of pharmacy. It feels partially justified in taking this attitude because of the recommendation made by Dr. W. W. Charters of the University of Chicago, in "Basic Material for a Pharmaceutical Curriculum" which is the title of the book containing the report of his study of Pharmacy, wherein he proves pharmacy to be a profession and needed by the community.

This study of pharmacy directed by Dr. Charters was under the auspices and financed by the Commonwealth Fund of New York.

It may be of interest to list some of the School's more recent activities and to tell of the location of some of the more recent graduates.

The School of Pharmacy has been asked to name a pharmacist in several of our major hospitals and this function coupled with other co-operative service and pharmaceutical advice to the hospitals has enabled some of our hospitals to develop their first efficient pharmacies. A visit to the pharmacy at City Hospital or to our own Lakeside or to Babies' will be of interest even to the layman. Nearly all the other hospitals of Cleveland are under control of our graduates and many of these pharmacies are in daily contact with the School.

Our students serve a short internship at Lakeside Hospital where one of the pharmacists, who is likewise on our teaching staff, sees that they are instructed in regard to the functions of each department of the hospital so that when this student becomes a pharmacist and when he is called upon for information relative to public health matters, he may disseminate correct information.

The School is manufacturing pharmaceuticals for our own hospitals and for some outside of the University. This is not done for the purpose of effecting a financial saving, which it happens to do, but for the purpose of developing and standardizing formulae and for the purpose of aiding cer-

tain medical men in their researches looking to new methods and often to new drugs.

One of the functions of a School of Pharmacy is to maintain a pharmaceutical chemistry laboratory where advanced applied pharmaceutical chemistry may be taught, after the student has had three or more years of fundamental chemistry, and where research in pharmaceutical chemistry, which is now being done largely by commercial firms, may be carried forward. A start has been made by our School in this direction.

One of our new experiments is to provide a pharmacist, also trained in X-ray and hospital laboratory technique, to a hospital of insufficient size to have one person for pharmacy, one for X-ray and one as technician in the pathological laboratory. This experiment has worked well and it is among our plans for further development.

Our advanced courses in manufacturing and analytical pharmacy have provided some men and women for commercial laboratories and the field is also open in food and drug inspection laboratories of city, state and nation.

The School maintains a dispensary where prescriptions from the Health Service physician are filled as was outlined in an earlier issue of the *Alumnus*.

We are not losing sight of our function of making pharmacists for drug stores and our work in this respect is beginning to show results since the number of pharmacies in Cleveland whose major activity is perscription and physician's supply work has increased more than tenfold during the past ten years.

Our present location must be vacated in June because of hospital building development and a new location for our laboratories will be provided. This, coupled with the new Lakeside Hospital pharmacy upon the campus, will put us in the front rank as far as the opportunity to do pharmaceutical research is concerned.

The enrollment of the School has been kept at about one hundred and twenty-five persons for some years. Our Faculty has been gradually increasing and its ranks are being filled by scientists who are equipped to do their work. It is the policy of the Faculty of the School of Pharmacy to elect to the higher positions only those who have completed doctorate studies and to take into the lower ranks only those capable of procuring the doctor's degree.

Our strongest points are our Faculty and equipment for student work and our thoughts are now headed toward physical plant and equipment for advanced teaching and research.

THE VALUE OF ENGLISH IN A PHARMACY CURRICULUM

By Adelaide E. Harris (Mrs. R. J.), M. A.,
Instructor in English

In one sense it is no longer necessary to argue for the study of English in the School of Pharmacy. The constant lengthening of the required training from two years to three and four, with the consequent broadening of the curriculum to include more subjects of a liberal nature has been towards the strengthening and justifying of the position of English. Indeed ever since the Cleveland School of Pharmacy became a recognized college of Western Reserve University, its position has been assured. The time assigned to it has kept pace with the raising of the general requirements—one hour in 1919, two from 1920 to 1922, three from that time. The next step, and one which is likely to come with the establishing of the four year course in Pharmacy, will naturally take the form of an additional year, a year which—let me hasten to add—will undoubtedly be an elective and designed only for those who are specially eligible for it.

To this extent then there is no need for argument. Pharmacy is a profession. The man who enters a profession today, must be highly trained, and English is everywhere recognized as an essential element in that training. All this is true; but it does not follow that everyone concerned is convinced. Many a student within the school and druggist without still raises the old cry: "Why? What is the use of English in the Pharmacy School?"

To answer this question, the two divisions of Freshman English this semester prepared arguments, with the idea of having the best paper published in the PHARMACON. Perhaps the very thought of appearing in print affected the style of the writers; at any rate no one argument adequately covered the subject. That which appears is hence composed of points taken from a dozen or so of these papers, proper acknowledgment being made in each case. The result, though it may not be as smooth or as well-organized as a single paper might be, is a synthetic

argument for English in the School of Pharmacy, presented by those who are at present suffering and—it is to be hoped—profiting from it.

Joseph Dworkin opens the argument:

"Why should a pharmacist, whose business it is to sell drugs, patent medicines, and cigarettes, bother about commas, question marks, quotation marks, and all the other marks? Why should a pharmacist, who has to prepare remedies for the sick, worry about Homer and Milton, about the ravings of Hamlet or other fictitious characters? Wouldn't it be much better for him to devote his time to the study of window trimming, salesmanship and general merchandizing? Many times you have asked yourself these questions. Have you ever answered them satisfactorily?"

"The answer is just this. Without a thorough knowledge of English, the success of any pharmacist is greatly handicapped. What is more important to him, if he is to be successful in his profession, than the ability to speak well? How is a customer to know whether or not his druggist is learned in his profession? Is he to judge by the clean floor, which was mopped by the colored porter? Is he to judge by the bright soda fountain, over the shining of which the clerk has labored all afternoon? No, he wishes to know the extent of education and the professional knowledge of the pharmacist and not the ability of his help. This he can do by conducting a conversation with him, and by considering not only the text of his speech, but also the manner in which it is presented.

"Have you ever listened to a 'crackerjack' salesman? He is not one who falters in his speech, who hesitates as if in search of the right word, who is constantly saying, 'I mean a...' The 'crackerjack' salesman is able to express himself in clear, concise form. His speech is never confused and halting. It is forceful and convincing and 'well-groomed.' Of course this does not mean that the model pharmacist sells his language and not his goods, but it does mean that with the aid of good speech one is able to serve the public and at the same time 'make his little bit' better than without. So we see that the ability to sell goes hand in hand with the ability to speak."

This daily need of clear and accurate expression in business relations is further amplified by Robert Fitch. He makes the point

that "book learning in itself has no value if the pharmacist cannot express himself, and his technical knowledge is practically worthless if he cannot translate it into words which people unfamiliar with the subject may comprehend. For example, the term 'neutralization' may mean little to the customer suffering from the acid stomach, but if the pharmacist explains fully that it is the reaction between a base and an acid to form a salt and water, defining base, acid, and salt respectively, the person has some idea of the manner in which a stomach remedy takes effect."

"Direct, clear speech," asserts Otto Wolfert, "may be far more profitable than we suspect," and further illustration of the point is furnished by Wanda Baygrowitz. "If the pharmacist is careless in his speech, the doctor may think him careless in filling prescriptions, with the result that he will patronize another druggist. Skill in English," she continues, "is regarded sometimes to a marked degree, and errors are not infrequently disastrous. When a young man applies for a position, the employer must form his estimate of him from his appearance, his manners, and his speech. His collar may be clean, his shoes may be shined; but if he speaks in harsh tones, with 'he done,' 'I seen,' 'that there,' 'whatdye-tink?' and the like, the employer will consider him careless and ignorant."

"One must remember," warns Casmer Miskiewicz, "that a pharmacist does not shut himself up in his laboratory, spend all his time there, and disregard the life outside. Being a professional man, he is bound to find himself in the society of other professional men; and in order to be at ease with them he himself must appear to be well educated. Now it is far easier to appear to be wealthy than educated, for an uneducated man may be dressed most properly and his manners may be most correct, yet by his speech his lack of schooling is betrayed, and all the excellent impression that he made is instantly erased."

What, too, of the need of men who are able to speak effectively in their own organizations, entertainingly at social gatherings, or convincingly before legislatures? "The pharmacist who is honestly interested in his profession," continues Mr. Miskiewicz, "will wish to join pharmaceutical organizations and attend their meetings. To be able to preside or at least to take an active part in these meetings, he must be able to speak

well. The English course in college prepares the future pharmacist for this role." The last statement may well be challenged, but it is none the less true that the English course is at present the only course in the School of Pharmacy which does contribute definitely towards that end.

But why write themes? The question variously phrased has been asked countless times, and doubtless will continue to be. The lament of one freshman, "I thought when I finished high school I had done with theme writing," still echoes through the corridors. There is occasion for sympathy; nevertheless it is through the rigorous requirement of written compositions—two a week the first semester, one the second—that the course in English chiefly justifies itself, at least on practical grounds. Through the red-pencilled corrections, which necessitate the use of the Century Handbook, and through the personal conference, errors in grammar and diction, in punctuation and spelling, as well as in matters of rhetoric, involving unity, clearness, and force, organization, logic, and style, can be pointed out and—when co-operation permits—eliminated. The emphasis upon the need of clearness and accuracy in the written word can also be applied to the spoken, and in large classes where a great variety of work has to be covered, this is the most effective method.

Good English applies to uses of business as well as of literature. Business letters are no longer written in the commercial jargon once reserved for them. To make the points you wish to make, in the fewest possible words, at the same time not neglecting the courtesies of human relations, is the rule of any correspondence not purely personal. For specialized forms, a manual of business letter writing can always be consulted.

One student quotes a letter actually received from a druggist:

Dear Sir;

Dr. ——— of this city has ask us to try and get him some of the new drug Ephridis vulgris X not know what form it is prepared and where we can get we are writting you. thanking you to let us know the above. We are yours very Truly.

He then asks: "With this letter before you, can you deny that the English Course in the School of Pharmacy is an absolute necessity?"

Other students stress the value of the course in advertising. "You realize," writes Joseph Dworkin, "the importance of correct wording when you plan signs, advertisements, and circulars. Some words will present the item you wish to sell so attractively that the desire to buy is immediately aroused. If his signs are to carry a selling message, the druggist must thoroughly understand and use the most specific and connotative words. The writing of themes is excellent practice in choosing words." He might have added that the use of the Vocabulary Builder—an inexpensive book, published by the Century Company, which is recommended to anyone interested in strengthening his vocabulary—is also an important aid towards this end.

"Advertising," explains Wanda Baygrowitz, "is composition which has to bring monetary results. A slight error in punctuation or a misspelled word may cost dollars and cents." "A well written advertisement," states Casmer Miskiewicz, "is sure to attract many buyers, while a small error in the wording may cause serious misunderstanding and loss of trade." On this point Bernard Middendorf quotes Sir Francis Bacon: "Writing makes an exact man," and asks: "If writing makes a man exact, should the pharmacist, who proclaims his exactness in his work, ignore an opportunity to improve it?"

Finally, is it too much to expect that a member of a profession should be able to express himself with reasonable clarity and accuracy either in speech or writing. A janitor may—as did the janitor in my apartment building—compose the sign: "Positively no rugs to be beat on this porch," and cause no surprise, because he is a janitor; but the pharmacist who writes on a card, reported to be in one drug store: "Smocking forbidden here," brings discredit upon himself and his profession.

In a general course in English, the reading of books, both old and new, has an important place. The "practical" pharmacist, whether he is studying or practising the profession, is likely to challenge the need of this, particularly when it includes any study of poetry or of the history of literature.

Practical applications can be made. Edwin Whittaker believes that the concentration demanded of one who is searching for an author's meaning is of particular value to the pharmacist who has to read and inter-

pret drug reports, and Nelson Schroeder states that "English is a valuable aid in the study of practical pharmacy, for it teaches one the necessity of exactness in reading." That one's education after graduation must be carried on largely through books is a commonplace, and Ruth Kotershall expresses the hope that "students will be able to continue their work because of the foundation laid in the class room."

The acquiring of ideas through reading is commented upon by Wanda Baygrowitz. "Reading makes the student more tolerant of the ideas of others and more receptive to new ideas. Through reading he develops his thinking powers, for reading without thinking is as bad as not reading at all." "The pharmacist," notes Robert Fitch, "meets people from many walks of life and with various interests, and he should be able to exchange opinions with them. To do this his knowledge must be diversified, collected from many sources. Here reading comes to his aid."

It should not be necessary—nor would it be possible—to translate all the benefits to be gained from an English course into the medium of dollars and cents. A pharmacist claims to be more than a merchant; he is also more than a pharmacist. First of all he is a human being, and his life cannot be bounded by the counters of his store or the walls of his perscription room. In the English course, as in any similar course in any college, the attempt is made to prepare the man himself for an intelligent use of his life apart from his work.

"This," in the words of Otto Wolfert, "is not too much to expect of an education. It should include not only the preparation for business, but it should develop in an individual the ability to use his spare time profitably to himself and to society. In other words, it should include a training that will supply an outlet for personality."

"It is the English course in college that is the basic element of this training. It supplies the outlet first of all in the study of the English language. One's personality may be of little use to society if the tongue or pen cannot convey it. It supplies the outlet also through the reading of literature. It is essential that in college our taste be developed for the better forms of reading; otherwise we may spend the main part of our lives finding reading material only in the daily funny page or the latest wild and woolly western."

There is too little time in a crowded year to do more than suggest the world of literature. If certain standards can be established, if the student can be led to discover for himself that *The Return of the Native* and *Lord Jim* are in some way more true to life and hence to art than are the novels to which he has been accustomed to turn for easy enjoyment; that Harper's contains stories and articles more worthy of the time of an intelligent man than does *True Stories*—a great deal has been accomplished. Only enough of detailed analysis is attempted to point out how much of truth and beauty can be packed into, for example, the narrow space of a sonnet, if one is able by instinct or training to find it there. Great poetry because of its marvelous compression and its unerring use of the right word is usually best for this. Of the history of literature only the broadest outlines can be sketched, but firmly enough, it is hoped, to make impossible the statement of one freshman—he shall be nameless—not very long ago: "In the Elizabethian Age nothing much was done in the way of literature."

Pharmacy itself has a long and interesting history; one with which every student of the School is made familiar. "It is one of the oldest of the sciences," to quote Otto Wolfert, "dating back four thousand years, an honorable, dignified profession. For that great length of time Pharmacy has been giving to the world services that are indispensable." But Pharmacy itself needs leaders, men who can raise the standards of the profession, "men who," according to Nelson Schroeder, "can speak and write effectively, men who can manage its affairs with such skill as to gain the respect and confidence of all the people upon whom it is dependent."

What of the leaders of Pharmacy? Are they being trained for that role? Is it not true that whereas a generation or so ago many men entered the profession after having had the foundation of a liberal education, today with the requirement of four years of highly specialized training few think of entering it who have gone further than the secondary school? If so, it is the more essential to include in the curriculum courses of a more liberal nature. The men who are to form and control pharmaceutical organizations, who are to be the deans and professors of pharmacy colleges will need more than the subjects pertaining to pharmacy alone.

BE PROFESSIONAL, SELL REPUTABLE MERCHANDISE AND GIVE SERVICE

This has been the policy of the Miller brothers, who are at the head of the Miller drug stores in Cleveland. Both of the Miller brothers were graduated from The School of Pharmacy of Western Reserve University. Mr. Louis Miller, the older of the two, was graduated with the class of '15. Mr. George Miller, who by the way, is president of our alumni association, was graduated with the class of '22. Previous to his entrance into Pharmacy School he spent three years in Adelbert College. These men have ever had an interest in our school. At the present time Mr. George Miller is doing research work in the analytical laboratory on coal tar. They also make use of our library at frequent intervals in connection with new problems that occasionally arise in everyday practice.

It would do any student of Pharmacy much good to visit one or all of the three stores maintained by these men. If as a student of Pharmacy, you are planning to enter the professional or retail side of the drug business, you will find many suggestions and inspirations in a tour of these stores.

Business in these stores is not limited to either purely prescription or retail trade, however, each and every line of goods makes up a department of its own. For instance, the delivery service is organized into a separate department and has at the head of it a man who looks after all delivery details. The wholesale department has a man at the head who looks after the stock and keeps it moving. Another individual has charge of the fountains while another has charge of the professional work such as the compounding of the prescriptions and the detailing of doctors. This department organization relieves one man of all the worries, speeds up the work and creates greater efficiency.

Let us enter one of the stores and see what we find. The first impression we receive is that the place is immaculately clean. Every article is in an orderly condition and well displayed. The aisles are more spacious than the average. We do not have to wind our way around protruding tables. A glaring price card is not to be seen. The fixtures are of the latest design and of finest quality. All goods are grouped departmentally and the case which displays a certain

line shows signs of forethought. Not one case is over crowded nor do any show signs of scanty stock. Every article in itself is displayed to such an advantage that it must attract the customer's eyes. If we look closer we find that all merchandise is representative of recognized and reputable manufacturers. Mr. Miller will tell you that they do not even give the less reputable firms a hearing regardless of how attractive an offer they may have. They have found that the public as a whole appreciates the sale of goods of the highest quality.

Perhaps the next to catch our attention would be the mezzanine. All the prescription work in the Cleveland Heights store, as well as that done in the Fenway Hall store is done in view of the customer. This mezzanine prescription room allows the curious customer some relief as to what becomes of his prescription, yet this arrangement allows no interference with the proper filling of the doctor's orders. The prescription department of the Statler Hotel store occupies the entire second floor over their room.

The prescription department is one which will hold our interest for quite some time. Here we find system plus. Every order received is triple checked by licensed pharmacists; the doctor's instructions are carefully noted to see that if in a busy period he might have made some error. Every ingredient that goes into a prescription is checked on the balance or in the graduate; the label is put on the bottle, or in the box and the prescription again checked. Special attention is given to dosage, and every pharmacist who works for Millers must have a thorough knowledge of toxicology. If the final "checker" finds the prescription to be O. K. he attaches a small slip to the package which states "the final check on this prescription has been made by ——— Ph. C. This inspires confidence in the customer and serves as check in the store should a question arise.

Should a physician phone in a prescription while you are inspecting one of these laboratories you will note that it is read back and checked before it goes to the compounding. This carefulness has done much to build up confidence in the doctor. In their three stores they employ twenty-one registered pharmacists to meet the exacting demands of approximately three hundred and ninety-five doctors. Each and every

pharmacist is selected on the basis of training, accuracy and honesty.

The manner of dispensing is very neat. Dropper prescriptions go into a special brown bottle; all tablet boxes have hinged lids for convenience and for protection; one size of label is employed and cut down to fit the package by means of a paper cutter. Thus every label fits the package exactly. Their policy is to never give the customer an untidy package.

At the Heights store you may find full equipment for manufacturing. The latest piece of equipment to be added is an autoclave for the sterilization of all eye solutions. Practically all U. S. P. and N. F. Preparations are made in the manufacturing department.

Another complete line carried by these stores is that of biologicals. They serve many of the smaller hospitals in the capacity of distributors for many of the biological houses. Baby foods and supplies are another of their specialties. In fact there are very few baby foods on the market that the Miller stores do not carry in stock.

This group of stores serves the public with the one great idea in mind: that Pharmacy, after all, is a unit of health. Counter prescribing is not tolerated in the least. A remedy is never suggested to the customer regardless of how well the clerk might be able to suggest a cure. The Miller Brothers hold to the idea that the doctor is the diagnostician and the pharmacist the compounding and toxicologist. Perhaps they caught hold of this fact while in school. Is it not true that the man who really understands the mechanism of the human body and the action of drugs upon it senses keenly the fallacy of counter prescribing.

You may wonder how a clientele of over 4,000 people has been built up. The steps taken have been quite logical to be sure. Here are a few of the reasons that Miller's customers always come back. They realize that only the most reputable merchandise will be sold them. They know that if they phone in an order for an article that they will receive it if it is obtainable in the city, regardless of whether Millers carry it in stock or not.

To meet the varying demand of their customers they carry no less than 60,000 articles on their shelves and in their stock rooms. A standing order is on file with all reputable firms for any new product

they may produce. All proprietaries, and I do not refer to "patents," in the Statler Hotel store are indexed in a store catalogue as to name of product as well as to manufacturer. A solid wall of specially designed cases along one side of the prescription room is completely filled with all the specialties common to the drug business.

The Miller Brothers will not hesitate to tell you that one of their biggest trade builders is their delivery service. Five delivery trucks are at the disposal of the delivery department. This requires a good sized force of delivery men. Two men are on duty packing and routing orders. A traffic clerk checks all orders, prices, and credit ratings. He also looks after the making out of all delivery slips, route records and looks after all cash. A delivery slip is made out for each order in triplicate. The original remains in the store. The duplicate goes with the merchandise to the customer and the driver retains the triplicate, later filing it with the traffic clerk, for a store record. Each driver makes out a daily report sheet. Before he sets out on his first trip he checks his car for gasoline, oil and tires, and makes such notations at the top of his report sheet.

The credit of each customer is carefully checked. The Cleveland Credit Association's ratings serve as a general basis for credits. If, after investigation, the customer's credit is found to be satisfactory, the traffic clerk marks the package O. K. If a satisfactory credit rating is not available the package is marked C. This indicates that the package is to be sent C. O. D. However, in case the delivery be a prescription, the delivery is made regardless of credit ratings.

A private inter-store telephone is maintained which hastens up delivery work. It often happens that a prescription is turned in at the Fenway Hall store, for refilling, which was originally filled at the Heights store. It is quite logical that this prescription could be more quickly delivered if filled at the Heights store. This is exactly what is done, thanks to the inter-store telephone. On the other hand, if one store should happen to exhaust its supply of a certain article an S. O. S. is sent to the other store by means of the inter-store telephone and it is sent out on the next delivery.

The question of getting new business is surely one of vital interest. New business

does not all come in unsolicited. Every statement that goes out to a customer of The Miller Drug Stores carries with it a selling enclosure. The aim of these selling enclosures is to suggest various needs to the customer.

A pharmacist is employed by the Miller brothers to do nothing but detail doctors, nurses and those in charge of doctors' offices. Whenever possible these young men, themselves, spend their time associating with the various doctors which they serve. They have found that the personal contacts have a good influence and that personal visits made in a friendly, helpful manner are quite welcome.

After ten years of constant effort the Miller brothers have found that the public and the medical profession as well are quite appreciative of a type of business such as they have tried to carry on. They will tell you that the secret of their success lies in the fact that they have tried constantly to maintain a high professional standard, have always handled reputable merchandise, and given prompt, efficient service.

EXCEPTIONAL HONOR GIVEN DELPHOS MAN



An exceptional honor has been accorded F. H. King, Delphos pharmacist, who has been named by Governor Vic Donahey to serve another term on the state board of pharmacy.

The appointment is for a term of five years and will make the seventh consecutive term for Mr. King on this board.

Notice of the appointment came as a great surprise to Mr. King, for it was unsolicited and he had no intimation that the Governor was considering an appointment at this time.

Three of his appointments in the past were made by Republican governors and three by Democrats. He was first appointed by Gov. Asa S. Bushnell, Republican, on March 31, 1898. The next appointment was made by Governor Nash, Republican, in 1903. He was reappointed in 1908 by Gov. Andrew Harris, Republican. Gov. James Cox appointed him twice, first in 1913 and again in 1918. Governor Donahey gave him a reappointment in 1923 and has now named him as a member of the board for a term to expire in 1933.

Mr. King is now sixty-five years of age and has been a member of the board for a period of thirty years, or nearly half of his lifetime. For forty-five years he has been engaged in the drug business in the city of Delphos.

In the thirty years he has been a member of the board, Mr. King has not missed a meeting of that body. He is the oldest member of the board in point of service in its history and his re-appointment makes him the oldest member, in point of service, in any department of the state government.

Other members of the board now are J. S. Rutledge, Akron; Ralph C. Knisely, Ravenna; Charles Ehlers, Cincinnati, and A. L. Flandermeyer, Cleveland.

Mr. King states that he considers this appointment the greatest honor yet conferred upon him.

GOING SOUTH

Every once in a while we hear of someone "going west" and occasionally we hear of some of our graduates "travelling east" but it remained for the Dean to "go south."

The Pharmacon reporter assumes that he had a good reason for his southern trip but the reporter also knows that in his capacity as President of the Association of Colleges and as President of Phi Delta Chi it ought to be easy for him to select a southern trip, especially during inclement weather here at home.

In my chat with the Dean I thought I discovered one or two bits of information that may be of interest to Pharmacon readers. He visited the Medical College of Virginia

at Richmond. It is situated at the corner of Twelfth and Clay Streets, just across the corner from the White House of the Confederacy. This institution is made up of the four professional schools of Medicine, Pharmacy, Dentistry and Nursing. The Pharmacy School has about the same enrollment as our own. The Dean of this School is W. F. Rudd, their professor of Chemistry and one of the busiest and most influential men in American Pharmacy.

The Dean reports that he embarked from Cleveland in the evening and arrived in Richmond at noon the next day when he was met in the station by Dean Rudd and a member of the local chapter of Phi Delta Chi, just as he was gazing up at the sign, "White Women," and wondering what it meant.

Dean Rudd took him home (carried him, as they say down there) where he was given a real southern meal and introduced to "corn sticks" which he says are abbreviated editions of southern corn bread and not "corn likker." He adds that Dean Rudd is a religious man "like himself" and uses all his corn in this form.



He was then "carried" to the school and through that part of it belonging to Pharmacy. He was then "carried" about Richmond where he saw the University of Richmond and Monumental Boulevard and across a long bridge over the James River where the toll was one thin dime.

The University of Richmond, from which Dean Rudd received his A. B., is situated in a beautiful pine forest (short leaf pine) with a small lake between its college for men and its college for women. He says this is the institution where that question and answer story originated. Remember it?

He says he attended a fraternity dance that night where he saw ten different styles of dancing, the black bottom being the only one he recognized by name.

The next day he was "carried" through

the remainder of the college, met the faculty members and saw the hospitals, going through the one for "white folks." He met President Sanger and describes him as a layman in charge of professional education, a man upon whom the word ability stands out like frosting on a cake and with eyes that just bore clear through you and hit the opposite wall.

The Dean talked to the Pharmacy students at eleven o'clock in their assembly which is held just like ours.

He says that the two things of most interest from the pharmaceutical standpoint were the model drug store and the dispensary.

The drug store is a completely stocked store, from which nothing is sold, but wherein the students are taken in groups of four or five for two or three hour periods and taught store, conduct, store business, wrapping and labeling, analysis of prescriptions, how to sell and how to make up displays and dress windows.

They are given written tests upon this work. One question he saw was "Why not display Rouge on the cigar case?" This store is in charge of a registered pharmacist, retired, who has had thirty years experience.

The dispensary consists of about six eight-foot dispensing tables with a student on each side where prescriptions are brought in from the "out-patient-department" to be filled. Here the seniors are given real, and not dummy prescription practice. Two professors, both registered pharmacists, are in charge and the dispensary is open every afternoon. Every act, weighing, measuring and compounding is checked by an instructor. They fill from twenty-five to fifty prescriptions daily and use no proprietaries. The city allows them twenty-five cents for each prescription. He says students have been known to be refused graduation when they don't show proper skill in this work.

That evening he took a sleeper on the Seaboard for Raleigh, North Carolina. He debarked at seven the next morning and breakfasted at the Raleigh Hotel (pronounced Reilly) and took a bus for Durham. This is the town named after Bull Durham.

He saw the famous Washington-Duke Hotel at Durham where he met Professor Beard, who is the author of the article in the February A. Ph. A. Journal, in which he says regarding medicinal whiskey that he "abhors it almost violently." The reporter would like to underscore "almost." Professor Beard is from Chapel Hill, the School

of Pharmacy of the University of North Carolina.

Professor Beard "carried" the Dean through the Liggett-Meyers Tobacco Company where he saw Chesterfields made. He says that they just shoot out of a machine like tubes of wiener wurst and are chopped off just as they need them.

He was then "carried" out to the new Duke University. This was the site of Trinity College but nearly all of the buildings are new and old ones are fast being torn down to make way for the new ones of uniform architecture. Two miles further on ground is being broken for a medical school and where the men's campus will be located. This university has an endowment of over ninety millions of dollars left from the Duke estate. He then journeyed on with Professor Beard to Chapel Hill where he stayed all night in the pretty Carolina Inn that is not unlike Mt. Vernon in appearance.

The Pharmacy building has thirty-five rooms in it and at one time was the Chemistry building of the, now famous, Dr. Hertzy of the Chemical Foundation, located at Chapel Hill. This building has been remodeled and newly equipped and is something about which both Dean Howell and Professor Beard may brag.

He then visited Dean Howell in his own home which was built in 1817 and contains antiques that would make a real collector envious.

That night he returned to Raleigh and stayed at the Sir Walter Hotel and spent Sunday seeing the State College of North Carolina at Raleigh and attending a negro church where he heard "Deep River" and "Done foun' my lost sheep" and other spirituals sung. On Monday he arrived in Baltimore with a reminder of Cleveland weather, three below and fifteen inches of snow. He visited the College of Pharmacy of the University of Maryland, and saw Miss Olive B. Cole and Dean A. G. DuMez.

He took luncheon with Dean DuMez, E. F. Kelly, Secretary of the A. Ph. A. and E. G. Eberle, Editor of the Journal. That night he was entertained at dinner by a man with the plain name of Smith who drives a Chrysler and claims the fame of having attended school at Mercersburg Academy with our own James Speer Neely. He returned home that night and was met the next morning at the station by Mrs. Spease and the reporter for the Pharmacon who obtained this story.

The Federal Drug Research Unit

Very few pharmacists realize the extent of the researches having an influence upon pharmacy that are conducted by the various departments of the United States Government. Several of the departments are carrying out research work which affects the public health in one way or another and this is reflected in pharmacy in ways not often thought of by the busy druggist. For example, the Public Health Service (Treasury Department) controls the manufacture of serums and vaccines and develops methods for their standardization. The Bureau of Prohibition (Treasury Department) studies methods for the detection of adulterants in narcotics and medicinal liquors. The Geological Survey (Interior Department) examines mineral waters, thus paving the way for their evaluation as medicines. The Bureau of Standards (Commerce Department) aids in standardizing many commercial products, particularly rubber and glass, which are extensively used in pharmacy. The Department of Commerce also collects information concerning the production of drugs in foreign countries. The War Department and the Navy Department are usually represented in the Committee of Revision of the United States Pharmacopoeia, which provides standards of medicines. Both departments are large purchasers of medical supplies. The Agriculture Department administers a number of regulatory laws, the most important to pharmacy being the Food and Drugs Act, the Insecticide Act and the Caustic Poisons Act.

Ever since the Food and Drugs Act was passed in 1906, the enforcement officials in

the Agriculture Department have felt the need of more reliable methods for the analysis of drugs and a great deal of time has been devoted to the search for new and more desirable methods. The results of these studies have appeared in various publications, chiefly the pharmaceutical and chemical journals. About two years ago the Department established a unit, (Drug Research Unit), for systematic research in methods of the analysis of drugs on a more

extensive scale than had hitherto been the case. Mr. L. E. Warren, who was selected to have charge of this work, was graduated from the University of Michigan College of Pharmacy, with not only an enviable record of proficiency in his chosen line, but with the highest esteem of his professors and fellow students, because of his irreproachable qualities of character. In his long and varied professional career as a drug analyst he has never deviated from the straight and narrow path which he marked out for himself in student days. When it has been a question of choice as between ethical standards, as he conceives them, and

maintenance of position with mental reservations, there has been little hesitancy on his part in making the sacrifice.

Mr. Warren has had considerable experience in the manufacture and control of medicines, chemicals and pharmaceuticals. He was a food and drug inspection chemist in the Bureau of Chemistry during the early days of the Food and Drugs act; later he served as Associate Chemist in the laboratory of the American Medical Association and, for a time, as Chief Research Chemist for a large pharmaceutical manufacturing



LOUIS E. WARREN

Food, Drug and Insecticide Administration
U. S. Dept. of Agriculture

firm. His publications in Pharmaceutical Chemistry and related fields number more than a hundred. He is a member of the American Pharmaceutical Association, the American Chemical Society, the Washington Academy of Science and is an Associate Fellow of the American Medical Association.

Mr. Warren's work in the Drug Research Unit consists largely in the critical revision of methods used in the analysis of drugs including the identification and separation of potent medicinal substances in mixtures. During the last thirty years a very extensive literature in the analysis of drugs has accumulated, but the methods are widely scattered in several languages and some of them are misleading and unreliable. Search of the literature often reveals several methods for the analysis of a medicinal substance, yet the analyst may have no way of ascertaining what procedure is the most trustworthy. In this work the literature, both earlier and current, is searched for information on the analysis of drugs, and, as a result, a very considerable bibliography of the subject has been accumulated. In addition a great many analytical methods have been compiled and placed in the files for ready reference.

The Drug Research Unit continually receives inquiries from pharmaceutical chemists who desire information concerning specific analytic problems. In many cases these inquiries are answered at once from information already in the files. In other instances it is usually possible to give references to the literature where the desired information may be obtained. New methods, or those of uncertain status, are tried out by carefully controlled collaborated studies on preparations of known composition. A large corps of workers in schools of pharmacy and in the laboratories of pharmaceutical manufacturing firms are carrying out trials under Mr. Warren's direction. Our own School, through Professor Chamberlin, has assisted in some of these studies and a part of this work has already been published.

SELECTED

In a preceding number the PHARMACON announced its intention of printing in each of the forthcoming issues an article, dealing with pharmacy, selected from the various publications coming to our library. While the following article was not written for a pharmaceutical journal, it is so applicable to the business side of pharmacy and, consequently, to the vital professional side, that we believe it much worth while to ponder over its succinct statements from the viewpoint of organized pharmacy. We hope the article will help to more thoroughly convince all pharmacists and would-be pharmacists who read it that, "in union there is strength."

TO ANY MAVERICK OR THROWBACK

By Merle Thorpe

A correspondent writes somewhat petulantly that "we are over-organized" and says that "something should be done. . ."

While the rest of the world is gazing with envious eyes at our ability to get things done through teamwork some of us occasionally become discouraged.

Only recently the British sent a commission here to study conditions and to learn why the United States is showing her industrial tail lights to the rest of the world. The members reported, among other things, that they were amazed to find how American business men work together in communities and trade associations, "pooling their resources, exchanging information" on the principle that if a community or trade were prosperous, each unit would share in the prosperity.

A successful Italian industrialist, this summer, was discussing Europe's grave problems, when he stopped short to exclaim, "If we in Europe could only learn to pull together as you do!" He added, rather sadly, I thought, "We lack your genius for organization."

We have a distinct flair for teamwork. It is born and bred in our bones. "Appoint a committee." "Organize teams." "All together, and we'll put it across!"

We begin in America as kids on a baseball lot.

As is often the case we are apt to take

for granted those virtues which are part and parcel of our daily lives. There are many who profit from the work of their organizations, yet who glibly disavow any interest in group endeavor. Their disinterest ranges from apathy to antipathy. They "haven't time," or they "make a contribution," or declare that they'll have nothing to do with an organization "which is run by a clique."

They are the unwitting economic "throw-backs," freaks who have sloughed off generations of development and reverted to form. They become selfish members of a community or trade, suspicious of each other, as it was in the beginning of things.

Such men lose materially and spiritually. A New York banker said recently: "The time is coming when a bank's committee will ask of the applicant of a loan, 'Is he a member of his trade association?'" In other words, is he going it alone, trying to meet this intensive age without the help of his partners in industry?

Set this down as gospel: **The work of the world today is being done by groups.** Certain wastes are group wastes and can be only eliminated by a group program and group action. Questionable trade practices, once accepted in pioneering times, can be dealt with best by the groups involved. The "new competition" has pitted industry against industry, community against community.

The individual, no matter how strong as an individual, is weak without the strength of his group. And the beauty of American organization is that individuality is stimulated, not suppressed. If anyone doubts this let him announce to the members of the automobile manufacturers association that he is in the market for a car.

Roosevelt declared truly that every man owes something to his trade or profession—not a dole in the form of dues, but his best thought and inspiration. And Kipling, about the same time, viewing us and his own people with the eyes of a seer and prophet, remarked that the hope of the nation, lay in "the everlasting teamwork of every bloomin' soul."

Mavericks in business are picturesque but abnormal. Biologists classify throw-backs as freaks.

In this world of modern business with its complexities no man can stand alone.

—Nations Business.

OUR PLATFORM

By L. J. S.

A FOUR YEAR MINIMUM
COURSE IN PHARMACY.
ABROGATION OF THE ASSIST-
ANT PHARMACIST.
DIFFERENTIATION BY LAW-
FUL ACT OF PRESCRIPTION
PHARMACIES AND NONETH-
ICAL PSEUDO-PHARMACIES.
OWNER-MANAGERSHIP OF ALL
PHARMACIES.
CURTAILING THE PROMISCU-
OUS SALE OF POTENT DRUGS
AS ASPIRIN, SANTONIN, ETC.
A MORE PRACTICAL CURRICU-
LUM OF COLLEGE STUDY.

THANK

The Reserve Pharmacon

We hail with pleasure the January issue of The Reserve Pharmacon, a quarterly periodical published by the W. R. U. School of Pharmacy and dedicated to professional pharmacy. It is a well gotten up and well edited and illustrated twenty-eight page book, not too technical; in fact, not even predominately so. It is readable and interesting and does not lack the intimate personal touch even though it is a college publication with a serious purpose. To the well-balanced contents the clever drawings of Stark add piquancy and humor. We bespeak for this bright publication an increasing sphere of usefulness and a constantly growing number of readers. Keep up the good work.

—N. O. D. A. Journal.

ASSEMBLIES

We are glad to note that the quality of material brought to the assemblies of late has been of the better variety, both as to speech and content. The assemblies, it should be remembered, offer us our almost only opportunity of seeing and meeting our fellow students as a body. It is our humble suggestion that some form of diversion or entertainment be instituted before each assembly opening. This of course will necessitate lengthening the duration of the assembly and perhaps even altering its scheduled time, but why not? A satisfied, friendly scholastic body is a satisfied friendly alumni.

THERE'S NO LAW AGAINST IT.

The fan in the chemical laboratories whose duty it is to draw-off all those mali-

cious and obnoxious odors that are so prevalent in every chemical laboratory, has long been in disuse, and as a result many students leave the laboratory groggy. Several students have developed headaches from this source and one case of which we know was ill for several days. Can't something be done about it?

WORKING

While it is highly meritorious to emulate the ways of a Lincoln or a Carnegie in matters of after school work there is such a thing as overdoing it. Of course every man is or should be a law unto himself and potential units differ vastly in various individuals. If working two, three, or even six hours a day after school agrees with you, and by agreeing we mean that your school work is not suffering, then by all means continue it, but, if the sailing is not so smooth give this a thought.

THE KING'S ENGLISH

It is common knowledge that few druggists speak good English. This may be due in part to their training which in times past dwelt entirely upon things scientific. This however, is a different age and the advantages of being able to speak and talk in an efficient manner are too well known to enumerate them here. Furthermore it will be granted that the years spent in school are the formulative ones and that the Professors are still the instructors. In brief, let us have better English spoken in the classrooms.

BUILDINGS

To the observant reader the fact that in almost every locality in the country but ours there are being built and planned new Pharmacy buildings, must seem appalling. Perhaps the fifth city in the U. S. A. cannot support such a project. Perhaps there are other reasons. One thing we do know; we have not as yet seen the plans for a new Pharmacy School.

The following is from the N. O. D. A. Journal (President's Address).

School of Pharmacy

The old Cleveland School of Pharmacy and its buildings was a credit to the retail pharmacists of this city and it is a most bitter disappointment to them that Western Reserve University has failed to provide a suitable building for pharmacy; in fact, some of the trustees have even suggested

to discontinue the teaching of this profession at the university.

The School Advisory Committee and the N. O. D. A. must take proper steps and measures to see that our contract with the university is fulfilled.

In order that the above committee may be more familiar with school affairs I recommend that this committee meet at the Pharmacy School each month and that the Dean of the Pharmacy School extend such invitation to them.

I also recommend that at various times during the year one of our older and successful pharmacists be privileged to say a few words to the students, to enlighten them from the retailers' standpoint, what is expected of him as a pharmacist and what druggists' organizations mean to him.

THE SIGN "DRUG STORE"

Is Pharmacy a business or a profession? It is not the purpose of this article to decide this question nor even to write much about it. One of the duties of a professional man is to strive for the uplift of his profession and for its perpetuation. Do pharmacists do this?

A business man is only interested in doing for his class those things which will bring him longer and more profits. Druggists do not realize that it is the professional side of pharmacy, for what pharmacy stands, its ideals, its history, the concept of it in the public mind that brings them their business and that enables them to stay open and sell merchandise when others close. It is the sign, Drug Store. What is that worth to you?

If you do not agree with me then take down the sign and run a patent medicine and knick-knack store and see how you succeed. Close up evenings and Sundays. Fancy a store **with the same merchandise** and without its prescription department and the word "drug" or any of its synonymous or similar words being a successful store on the corner of 105th and Euclid?

Suppose the pharmacy schools of this State were abolished because the universities with which they are associated do not consider them to be worth of a place in educational institutions. Suppose that if they exist they must be independent schools run by druggists, for druggists and financed by druggists. Visualize this happening over night. Would it affect your business? Suppose the public took those few deluded doc-

tors seriously who say we don't use drugs any more. Cults thrive on this kind of fertilizer.

Our school has eight hundred and fifty alumni, ninety per cent in the drug business. What are they doing for their School? Are they complaining about it as they are complaining because some grocer sells Palm Olive Soap or are they organizing for the protection of their business?

Fifty druggists with a single thought, standing as a unit in Cleveland could have a school building that would compare favorably with the new pharmacy buildings at Corvallis, Philadelphia, Albany, Oxford, Chicago, Newark, Boston, Gainesville, Chapel Hill, Indianapolis, and those soon to be built at Brooklyn, Pittsburgh, Baltimore, and Lafayette.

Many other schools in the American associations have splendid buildings and in addition twenty-five per cent of Association Schools are building new buildings.

Fifty such pharmacists could pass any law in City Council or in State Legislature to correct honest evils not due to slothfulness and lack of business acumen. What are you going to do about it? Are you willing to be one of the fifty? If so, say so.

ASSEMBLY NOTES

The student body of the School of Pharmacy recently had the pleasure of hearing **Dr. Robert J. Ruth**, representing **E. R. Squibb & Sons**, in a very interesting lecture on biologicals, illustrating his talk with motion pictures which were complete in every detail. Within the last few years, several moving picture demonstrations have been given, showing the manufacture of biologicals, but we feel sure that Dr. Ruth's lecture and picture were the best yet. Several, yes, a goodly number of the Juniors and Sophomores, who studied bacteriology the first semester of this year, were rather chagrined to think that they had studied Ehrlich's and Metchnikoff's theories of immunity so assiduously out of a book, and then, scarcely a week after the bacteriology final, to have Dr. Ruth bring this film and show us the same theories on the screen in such a way as to make them ridiculously simple.

The first two and part of the third reel were devoted to statistics relative to the use of biologicals, also to a brief resumé of bacteriology concerning the types of products shown in the film.

The manufacture of diphtheria antitoxin was shown remarkably well, also the manufacture of the comparatively new product, diphtheria toxin-antitoxin. Following this, the preparation of smallpox vaccine was shown, although in not as detailed a form as the manufacture of diphtheria products.

The pictures were well described by **Dr. Ruth**, who is very much interested in the products shown to us. Dr. Ruth has been very active in the field of Pharmacy and very few of the audience a few weeks ago fully realized what he has done for Pharmacy.

Dr. Ruth received his Pharmaceutical training at the Philadelphia College of Pharmacy, and for some time after he graduated from this school, conducted a store in Elyria, Ohio. In 1922 Dr. Ruth joined the American Pharmaceutical Association in Cleveland, Ohio, and from that time on has made himself distinguished in this organization. He is the originator of Pharmacy Week, about which we hear so much every Fall. Without a doubt it has done much to better the opinions of people regarding the pharmacist, and has served to strengthen the slogan instituted by a rival firm: "Your druggist is more than a merchant." Following this work he lent his efforts to the A. Ph. A. campaigning for funds for the A. Ph. A. Headquarters Building. Only recently he has become affiliated with E. R. Squibb and Co., and judging from his manner, we feel that he is heart and soul for Squibb and is doing his best to advance their best interests.

Dr. C. A. Payne, of the University of Minnesota, recently gave an illustrated lecture about Yellowstone National Park. As Dr. Payne is a seasoned traveler and lecturer he interspersed his talk with many pleasing anecdotes. Especially fine were the lantern slides of the wonderful canyons.

Under Assembly notes

Mr. S. V. Lourie, of the Strouss-Hirshberg Co. Department Store, of Youngstown, addressed the students of the School of Pharmacy of Western Reserve University at 1:30 P. M. on March 20. His subject was "From College to Store Management." His talk, which was a lively one, covered the various phases of employment, turnover, buying, selling, merchandizing, and salesmanship.

Mr. Otto Muhlhan, one of Cleveland's most successful pharmacists, recently gave us an agreeable Assembly talk. He pointed out the advantages to pharmacists which can be gained by the proper affiliation with an organization.



Alumni



Are you interested in the School of Pharmacy? What did it ever do for you? If you are interested send us a picture post card. We would like your dollar but we don't insist for we want you to have the *Pharmacon*. We want you to be interested in us and to know what we are doing, but don't you want to know what one another are doing, too?

Do you know that Ohio has no drug journal? It has, to be sure, the *Ohio Druggist*, a monthly paper edited by the Ohio State Pharmaceutical Association, it has the *Ohio Valley Drug Association News* and the *Northern Ohio Druggist* published by the N. O. D. A., but we are sending you the *Pharmacon*. Do you like it? Come on, Alumni. Let us hear from you!

Georgine Lenora Carner—born Wednesday, February 22nd, 1928, Daughter of Orlando J. Carner, '25, and Charlotte Arndt Carner, '24.

Henry Chester Tamulewicz—born Saturday, March 10, 1928. Daughter of Caroline Novacki Tamulewicz, '24.

"JOE" FITZGERALD—1921

Joe is still in St. Vincent's Sanitarium, Santa Fe, New Mexico, and writes for a Remington's Practice. He says he is nearly well and wants to brush up a bit on theory. Glad to hear from you Joe.

JOSEPH ALBRECHT—1890

Joseph Albrecht drives to Detroit rather often. He says it is his love for his daughter Irene (Mrs. G. M. Cunningham, 1917). Please, Irene, write us and tell us if he ever goes to Windsor or to Walkerville.

IN MEMORIAM

JACOB LUSTIG
JOHN VOREL
JESSE C. LONG
O. EDWARD SELZER
HERMAN ADELSTEIN
D. W. SHERWOOD
W. F. SPIETH

The following people passed the January State Board examination for pharmacist's certificate:

George F. Obert

Louis Rutman

Morris Cantor

Carrie McDowell

George W. Brown,

Louis Rutman made the highest grade obtained in the examination—90.5%.

On the evening of March 8th, Dr. F. J. **Bacon**, of the Pharmacy Faculty, addressed the University Biology Club on the "Genus *Mentha*." The address covered research work done by Dr. Bacon before he came to Western Reserve.

ALLERTON DANCE PROVES A SUCCESS

The mid-semester dance, which was held at the Solarium of the Allerton Hotel on Monday evening, February 6th, was proclaimed a success. The music was furnished by the "Ohioans," formerly the Sigma Nu's. Among the faculty present were Dean and Mrs. Spease, Mr. and Mrs. Hosler, Dr. and Mrs. Bacon, Prof. and Mrs. Chamberlin, Prof. and Mrs. Davy, Miss Allen, and Miss Krivan.

The committee chairman, Vincent Maddalena, was ably assisted by Scott, Karner, and Aldrich. Maddalena procured the orchestra and hall, Scott had charge of the tickets, Karner distributed programs and took tickets at the door, and Aldrich was responsible for the fine entertainment which was forthcoming from the Hoffman sisters and Eddie Gibbons. The acts were clog dancing and consisted of two encores. In addition a novelty act was rendered by Mr. Jones at the piano. Punch was served. There were about seventy-five couples present, of which about fifteen were alumni.

Some of the married men students were in rare form and strutted about like eighteen year olds. Among these were Miller, Jioia, and Maddalena. This dance was well planned and the committee deserves praise for its good work. These affairs are certainly very enjoyable for the students and faculty, so let's have more of them.

PHI DELTA CHI NEWS

February 9th, 10th, and 11th were big days for the members of Alpha-Alpha chapter of Phi Delta Chi Fraternity, since at this time, they were host to the Twentieth Grand Council of Phi Delta Chi Fraternity. It was a lot of work, but it was worth it. To meet our brothers from all parts of the country, to work with them for our mutual benefit, and to enjoy their brief visit, more than paid for the hard work in preparing for the Grand Council.

The delegates started drifting in Tuesday evening, February 7th. Wednesday morning early, Brothers Larry C. Heustis, Grand Secretary, and C. V. Nichols, Grand Treasurer, arrived, unpacked their registration material and things began to hum. Parlor No. 1 at the Statler Hotel began to hum with the distinguishing dialects from different parts of the country. We could just about tell our California delegate by their western drawl, the Southern boys with their "daown Saouth," the Easterners with their deliberate droll, and the boys up Minnesota way by their blunt but forceful remarks. All day Wednesday the delegates roamed around the city, visited the local chapter house, cussed and discussed Cleveland's weather—can't blame them much—and rested up preparatory to some gruelling business sessions.

Wednesday evening, the local chapter held a smoker, which proved an ideal way to get everybody well acquainted.

Early Thursday morning, Brother Edward Spease, Dean of the School of Pharmacy, and Grand President of the Fraternity, called the convention to order. Brother N. R. Thurston, Xi chapter, of Columbus, pronounced the invocation followed by appointments of various local members by the Grand President. The regular order of business then followed until 12 noon; business was resumed at 1:30 P. M.; adjournment at 3:30; business again resumed at 7:30 P. M.; adjournment at 9:30 P. M. At the evening session, the nominating committee proposed that the present officers be re-elected for the coming year. The vote was unanimous, the officers are as follows, Grand President, Edward Spease; Grand Vice President, J. E. Galloway; Grand Secretary, L. C. Heustis; Grand Treasurer, C. V. Nichols; Editor in Chief, R. P. Hollenback.

The business meeting was resumed at 8:30 Friday morning. At 12 noon the an-

nual Grand Council official photograph was taken. The rest of the afternoon was given over to committee meetings.

At 6:30 Friday evening, the annual banquet was held at the Statler Hotel. Entertainment was provided by the local chapter to supplement that provided by the brothers since a very enjoyable time was had by all.

Saturday morning concluded the business sessions. At this time the committee on time and place for next meeting reported that they had chosen Louisville, Ky., for the next meeting in 1929. The boys from Louisville certainly deserved it. They made us believe that Louisville was the hub of the universe, and judging from the number of banners and catalogues, advertising Louisville, the delegates must have meant business.

Memorial services and benediction were conducted by Brother Thurston and the meeting was adjourned until 1929.

Many lingered until late Saturday saying goodbye, but the majority hastened to leave the city and return to their respective chapters.

On Wednesday, Thursday, and Friday, February 22nd, 23rd, and 24th, the actives and alumni of the local chapter of Phi Delta Chi carried, transported, drove—or what have you—seven neophytes across the hot sands past the portals of Gehenna, pausing every so often to allow the heat to take effect, into active membership into the fraternity. According to the new brothers who were just initiated, Sherman, the great Civil war general, evidently hadn't heard of or been through a fraternity initiation when he made his brief but explicit remark about war being hell, or he would have most certainly revised his statement to take in "Hell" week in Phi Delta Chi. We don't know how much money the actives saved during the week or so in which the pledges were being initiated, but they certainly consumed plenty of cigarettes, candy etc. Perhaps before going any further it might be wise, or rather, polite, to mention the names of these young men, who felt for a week or so that they had no friends in the world; Edgar Cantlon, Aloysius Kuchta, Nelson Schroeder, George Breuhler, Clarence Spiece, Adelbert Patronskey, all of Cleveland, Ohio, and Robert Kumpf, of Canton, Ohio. Lon G. Lyman, of Youngstown, Ohio, was all ready to accompany his fellow pledges on their perilous quest for light, but was compelled to postpone his initiation until the near future on

account of sickness in the family. Pledge Sedely, because of sickness, was unable to be initiated but will accompany Lon as soon as he recovers completely from his sickness.

The initiation wound up with a big feed Friday night at 12 midnight. Brother Ischie, who talks, sleeps, reads, nothing but Coca-Cola, provided plenty of Coca-Cola with which to drink the health of the new brothers. Our Steward, Carl Shane, certainly did himself proud in putting out that dinner, with the aid of his able assistants, Earl T. Cook and Donald Kressler.

The actives certainly feel proud to welcome into our midst these fellows, proud to present them to the Pharmacy School as worthy fraternity brothers, and proud to feel that they are going to work with us for the betterment of Pharmacy and Chemistry, and in so doing work for a bigger fraternity.

The recent epidemic of colds seems to have hit our house hard. Brothers Kumpf and Baldinger started out in fine style with severe colds, which soon attached themselves to some of the other brothers. We are all patiently waiting for warm weather; the sooner the better, according to Brothers Kumpf and Baldinger, who will be more than glad to relinquish their job of watching the furnace fire go—out.

Our mascot, Gladys, came, saw and was conquered. To allay any rash suspicions, Gladys was, or maybe, still is, a cat, who came to cheer our weary hearts. She would have lingered, but alas, our hearts were not so weary, especially after one or two days with Gladys around, so Gladys wended her way onward, whither we do not know; how—we know, but who cares; and why—that's nobody's business.

Brother Gilbert has left the employ of The Standard Oil Co. and has taken a position with the Rahn Drug Co. selling Rahnous Capsules in the Southern part of Ohio. Needless to say Brother Gilbert and his Rahnous Capsules were appreciated during our recent siege of colds. He spends the week-end with us, and the rest of the week behind the wheel of his flivver or behind some druggist's counters crying the merits of Rahnous Capsules.

Brother Hiland, Ph. G. 26, and George Brown, Ph. G. 27, are now working for Marshall's and are living at the house. Brother Gayok is also working for Marshall's and is living at the house. Brother Grommol, of Meadville, is now in California,

having a fine time, and not very anxious to leave.

KAPPA PSI NOTES

Brother Bresler of Eta Chapter of Philadelphia is now located as a representative of E. R. Squibb of New York. He was present at our last initiation at which time we had an opportunity to become quite well acquainted with him.

Brother Wade Wetzel of Amherst recently visited the men at the Fraternity House while on a business trip in Cleveland.

Brother Plent a short time ago changed the location of his store. He is located on the corner of Broadway and Miles Ave., his new store being across the corner from his former site. Brother Hickernell of City Hospital is doing part time work for him.

Brother Turk is now working in Marshall's Drug Store at 105th and Euclid. Brother File is manager of that store and Brother Nagy, an Active, is also located there.

Brother Kottenburg, of Wisconsin, is Assistant Manager of Marshall's new store which opened at Mayfield and Euclid on March 17th.

Brothers Geuss and Jewell, of Warren, Ohio, attended Chapter meeting a short time ago. Brother Cullinan, also of Warren, was present at our recent initiation.

Georgine Carner is the name of the new baby girl recently born to Mr. and Mrs. O. Carner. Brother Carner is in the Pharmacy at Lakeside Hospital and it is yet too soon to know whether or not his daughter will be a Pharmacist. Mrs. Carner is herself a graduate of the School of Pharmacy of Western Reserve.

Born to Mr. and Mrs. George Sherlock a baby boy, Richard William. Brother Sherlock is a graduate of School of Pharmacy and is now with Physician and Surgeons Pharmacy.

Almost at the same time as the above announcements were made we find that Mr. and Mrs. Ben Donahue, of Akron, were also kindly blessed. We are sorry that we cannot give the name of the new one but we are sure that the father and mother are proud ones at this time. Brother Donahue is connected with the Akron Pharmacy, associated with Brother Walters.

Brother Harry Smith stopped at the Fraternity House a few nights ago. He is now working in the Miller Drug Store at Fenway Hall.

Brother F. J. Bacon gave a lecture be-

fore the Biological Society of Western Reserve on the evening of March 8th. His subject was Studies in the Genus *Mentha*. Dr. Bacon is the head of the Pharmacognosy Department of the School of Pharmacy and having done a considerable amount of work on Peppermint he was very well qualified to give such a talk. He was formerly a Pharmacognosist for Eli Lilly & Co., of Indianapolis.

Brother Heter has been managing the M. J. Lacer Drug Store at Clyde, Ohio. Mr. Lacer has been on a vacation in Florida.

ALPHA PHI DELTA

Annual Kappa Founder's Day will be observed at the chapter house on April 1st, many of the local alumni will probably be present.

A hard-times dance was given at the house on March 16th and all the members had an enjoyable evening. The house decorations were weird and exotic to say the least, and everyone entered into the spirit of the dance. Refreshments were served from time to time during the evening and the dancing was interspersed with several acts by talented members.

Competition is keen for the activities cup and the committee's decision and award is awaited anxiously by all.

The spring formal will be held early in May this year. As yet no definite date has been decided upon for the dance.

A group of pledgees will probably be initiated in the near future. Pledge Spicuzza of Pharmacy is one of the eligible ones.

Basketball

PHARMACY ROMPS HOME FOR THIRD CONSECUTIVE WIN AGAINST OAKS ON FEBRUARY 8TH

With Nagy dumping them consistently, and with Karner, Kuchta, and Celke throwing in occasional shots, the mortar and pestle boys chalked up their third consecutive win. It was just one basket after another, and when the final whistle blew the locals were on the long end of a 52 to 17 verdict against the Oaks. Fifty-two points in thirty minutes is not a bad average. Two points per minute is a fast gait to go at. Any professional team would envy it, and would consider it a good night's work.

To get back to the game; the forwards began to work according to signals and

things came out pretty well. The passwork was fine and there was little dribbling. Only one shot was long, it was a half floor shot which Valway dumped without touching the rim. Kuchta sunk a couple of pretty pot shots, Nagy sunk about a dozen baskets, while Karner was good for six markers. Celke played a good game as also did Valway and Shroeder.

Nagy played a full game while Celke, Valway, and Kuchta alternated at guard, and Karner and Shroeder shifted at forward.

Mr. Hosler, our loyal and well-liked faculty member, whose hobby is sports, was on hand as usual to direct the team. He is pleased with the night's showing and feels confident that we can cop the championship of the Miami league.

GREEN TORNADOES ANNEX TWO MORE GAMES

The last week in February was important at least from the standpoint that we grabbed two more games in the Miami league. Monday evening the boys were on hand to play, but much to their chagrin the Bruins failed to appear. Accordingly the score was recorded 2-0 in our favour on account of the forfeit. However the Y. M. C. A. boys volunteered to play us as a practice game. The game was fast and many points were scored, the final score being 48-37. Scott and Valway paired off at guards, Fitch center, and Karner and Celke played forwards. The locals played well at first but seemed to tire during the second half. When the game was over, Karner had tallied twenty points, Celke ten, Fitch eight, Scott six, and Valway four.

On Wednesday evening the grand total was raised to seven straight wins, when the Oaks bowed to the tune of 23-11. At the half, Pharmacy was trailing 4-1. It was more like a baseball game in the seventh inning. However, the boys came to life and accounted for themselves by swishing the nets for twenty-two points, while the Oaks made only seven. On the whole, it was a poorly played game considering the fact that we have played much better in previous encounters. The passwork lagged at times, while the shooting was quite inaccurate and sometimes even bad. Nagy scored eleven points, Karner six, Celke four, and Scott two. The squad has no games on schedule 'till March 19th, when they play the Newman Club in the last and deciding game of the schedule.

WE NOMINATE FOR THE HALL OF FAME

Dean Edward Spease

Because he is an indefatigable leader in all things pharmaceutical; because he is frank, sincere and honest; because he possesses more energy and enthusiasm than any other individual on the campus; because he is the Dean of the School of Pharmacy of Western Reserve University; but, finally, because he was recently elected President of the American Association of Colleges of Pharmacy.

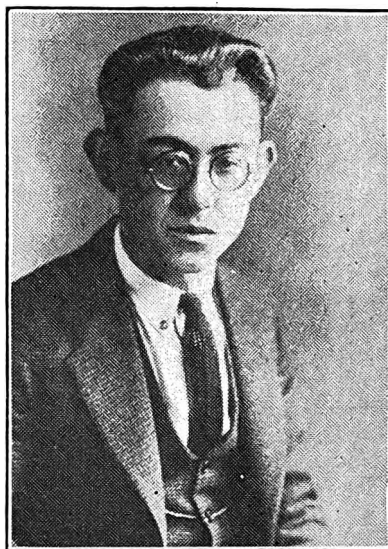


Gerald Wagner, M. S.

Because he has recently acquired an M. S. degree; because he has the harrowing job of piloting students through Quantitative Chemistry; because, though a young man, he knows his chemistry; and finally, because he has the ability to teach mathematics so that a Hottentot could understand it.

Prof. E. D. Davy

Because he is a man of few words; because he is a member of the A. Ph. A.; because he is a member of the Executive Committee; because he has done much research work with various alkaloids; and finally, because he is an authority on Analytical Pharmacy.





Dr. H. P. Lankelma

Because he is always smartly dressed; because his lectures are true lectures; because he became the father of H. P. L. Jr. on March 28; because he is a member of the Executive Committee; because he has written a book or two; and, because as a purveyor of Organic Chemistry, he is master of his craft.

Dr. F. J. Bacon

Because he has held both the Todd and Hollister Fellowships; because he wrote a Master's Thesis on Peppermint; because he has done much work on Digitalis; because he is a member of Sigma Xi, Rho Chi, Kappa Psi, Alpha Sigma Phi; and, because he is now the head of the Pharmacognosy Department.



STUDENT THOUGHT

"Your druggist is more than a merchant." How sad it is that the rank of the pharmacist fell so low that he had to advertise, or at least suggest to the public, that he was not a common vender. This familiar slogan was heralded far and wide. It appeared on labels, calendars, wrapping paper, bill and letterheads, on placards placed in store windows and in advertisements in the press.

The public today is almost as mystified as it was before this reminder was brought to its attention. Why, we ask? Because in so many instances he has proved to be nothing more nor less than a merchant.

In proportion, the "merchandising" pharmacists greatly outnumber the "synthetic" products representing many of the other professions. The evils imposed by them on society are no worse than those imposed by quack doctors, "cut-rate" painless dentists or "cheerleading" lawyers. However, the public can see only too plainly that a great per cent of the pharmacists are carrying on their business on a "merchandising" basis. Many other professional men may have commercialized on their profession; yet they may, if they so desire, hide away in a fifteenth story office and be out of the public gaze. The pharmacist is unfortunate in not being able to do this.

Granting that the profession of pharmacy is no worse than many other professions when it comes to professional ethics does not excuse the ethical man from stretching out and concealing the break made in the ranks by his weaker brother. It is up to every individual in the field to do all in his power to uphold the standing of his profession among others. Our large hospitals overshadow the "fountains of youth" which are so widely advertised. Skillful surgery has ever called forth the admiration of the public. The ethical dentist is honored by those who have had experience with his merciless competitor. The reputable lawyer is, in many instances, at the head of his community.

We must concede that the druggist is a respected citizen in his community. In spite of this fact, he is the butt of many jokes today. It all comes back to the fact that the field of pharmacy has too many merchants and not enough men of professional calibre. Slogans advertising that the manager of a drug shop is more than a merchant are not as readily accepted as one may think, espe-

cially when a man enters a shop labeled as a Drug Store or Pharmacy and is confronted on one side by a fully equipped lunch counter and on the other side by a line of snow shovels, ice cream freezers, and table scarfs. Far in the rear he may discern a few familiar looking bottles, which are bunched together on several shelves. It is to be presumed that these few bottles are supposed to differentiate this store from a confectionery or notion store. Even these few bottles are partially hidden by an attractive screen of price tags. Such a setting suggests to the customer that the manager is in business primarily to make money and not to serve the community as a dispenser of medicines, an agent of good health.

Shakespeare said: "Behold the loud laugh that oft bespeaks the empty mind."

Does not the appearance of a store express the attitude of the proprietor? Actions speak as loud as words. Does the "cheerleading" lawyer have the backing of his community? Does the "electric sign" dentist draw his patients from the most influential class of society? Is the "sure-cure" doctor entrusted with the sick in our hospitals? The answers are evident.

Pharmacy as a profession dates from antiquity. It is as old a profession as law, medicine and many of the others. It is too old a profession to be allowed to become extinct. The ethical drug store is too necessary in a community to be turned into a market house.

The desire to obtain a college education is growing rapidly. This desire is not confined to one class. The word "professional" suggests to us superior training. The inflow of students into the colleges of the country has forced many of the professions to raise the requirements for professional training.

Some went so far as to require a college degree as a prerequisite to actual preparation along professional lines. Pharmacy, as a profession, has just begun to realize into how strategic a position it has been thrust. The efforts for universal four year courses are deserving of highest commendation. The reasons for establishing four year courses are too outstanding for the thinking man to overlook.

It is logical that the doctors of the country are not going to take any dictation from a man who has had less education than they had when they were juniors in "prep" school. Will any professional man who has

spent eight or more years in preparation for his life work permit any other line of work requiring two or three years of preparation to be put on an equal footing with his, especially if he may so easily hamper it as a doctor may pharmacy? Human nature is not so charitable.

The actions of the pharmacist are ever before the eye of the people in his community. Probably no other professional man holds as many friendly chats in a single day as does a pharmacist. His customers know that he is a so-called college graduate. His community is constantly becoming better educated. More college trained people are coming into his place of business daily. Does the pharmacist hold his own with his customers when conversing? Yes! No doubt he does, as long as the conversation is on cigars, newspaper scandal or business mergers. How about the numerous other subjects of common discussion upon which the college graduate is supposed to have a talking knowledge? In this very instance alone, the pharmacist is very liable to have his training censured by the college trained customer. The result is a loss of confidence in the man's ability and a reverse in social circles frequented by trained and professional people.

In order to maintain his standing from this point of view it is necessary for the pharmacist to spend more time in preparing for his vocation. Medical science is progressing so rapidly that two or three years is not enough time spent in school for the young pharmacist to comprehend his side of medical practice. The pharmacist should be looked up to by the doctor as an authority on drug composition, and he should be able to give a satisfactory explanation of the drug's advantages and disadvantages. When the pharmacist can satisfactorily serve the doctor in this manner, the doctor will begin to consider him as a real professional man. Just why does the doctor listen to the "detail man"?

It is quite evident that the future pharmacist must spend at least four years or more in school in order to become a registered man in the profession. No doubt all of us as students of pharmacy have a real desire for the practice of pharmacy. We should have an unbiased reason for taking up this line of work. If we are taking up the profession as an avenue of service to humanity; if we hold the respect for the profession that is due so honorable a

vocation, we should do all in our power to make it a real profession. The best part of a professional man's life is spent in preparation for his career. He invests not only money but also time when he could be making money. Why spend all this time and money in college if you are to realize on Commencement Day that you are soon to become a merchant? Why not make up your mind to be a real professional man instead?

The public gladly awaits the ethical professional pharmacist. The profession of pharmacy may for a number of years, and not so great a number at that, be a profession with modifications. An inherent desire to be a professional man is three-fourths of the battle toward being one. Once society senses the desire of youth to be something worthwhile, it always responds with a helping hand. We hear much about statutory distinction between "professional pharmacies" and "drug stores". Are we as future pharmacists going to be more than merchants, or are we going to force society to grant our desires to be professional men?

Robert Porter.

☐ **Extracts** ☐

THE QUANTITATIVE METHOD IN SCIENCE

The development of mathematical precision seems to be one of the striking characteristics of present day science. Quantitative measurement not only has apparently become a sine qua non of the fundamental physical sciences such as physics and chemistry but also seems to be motivating much of the current investigations in the domain of the less exact biologic and social disciplines. Science has been defined as the attempt to describe natural phenomena in comprehensible terms. This is somewhat more discriminating and incisive than its designation as "organized common sense"; but neither point of view suggests the indispensability of mathematical analysis for the contemplation of that which may be properly termed scientific knowledge. No one will gainsay the cogency of precise statement and accurate analysis; but somehow biologic phenomena still involves a complexity that seems to exclude the possibility of the sort of interpretation that the physicist applies to many of his problems. Lest this discourage the devotees of medical in-

vestigation, we may recall a recent defense by Cole of the body of knowledge that still defies the quantitative analyst. The statement has been made that investigation becomes scientific only when it becomes quantitative. This, Cole proceeds, seems to be a narrow point of view which partakes somewhat of intellectual snobbishness. This attitude, however, is not universal; it is even rejected by many whose own methods are the most exact and quantitative. Cole recalls that Prof. Gilbert Lewis has recently said, "I have no patience with attempts to identify science with measurement, which is but one of its tools, or with any definition of the scientist which would exclude a Darwin, a Pasteur or a Kekule." To such a list Cole would add a Harvey, a Mendel, a Virchow, and many others. Indeed, mathematical analysis is only one of the methods of scientific inquiry.—A. M. A., Vol. 10, No. 3.

THE HEALTH ANGLE IN ADVERTISING

The physician has become a prophet in the land, and health is the word with which one conjures. Regardless of the substance to be advertised, the agency goes forth in search of medical opinion with which to vaunt it. Not that the health angle is always unwarranted; sometimes it is obvious. But not infrequently the advertiser stretches a point because he knows the health angle is popular. A soup is sold with the claim, "There's health in every spoonful." Of certain toilet accessories it is said, "Your doctor will advise against harsh, rough papers." Certified milk is called "health bottle in bond." Of cream cheese the advertiser asserts, "For its body building elements child specialists specify this famous dairy food." Somebody's cough drops are labeled "The cheapest health insurance in the world." Somebody's tobacco hasn't a cough in a carload. The list of things that doctors praise include a soap: "Doctors who know more than anybody else about skins urge simple care." An ointment: "Days of pain—a dreadful scar prevented—with the dressing for burns surgeons use." A nursing bottle: "Approved by thousands of doctors." A talcum powder: "Recommended for fifty years by physicians and nurses." A disinfectant: "For years the standard with hospitals and physicians." A mouth wash: "45,512 physicians indorse it." A baking powder: "772 New York doctors

declare — baking powder is most healthful." And innumerable breakfast foods, of which the least that is said is that "Doctors praise it."

The doctor's advice has been sought, it seems, for many of the most mundane affairs of human existence. Does one wish to wash some diapers: "The Borax treatment for washing diapers is recommended by leading physicians. Your own doctor will advise it." It seems that "Great doctors say: 'To break congestion, use mustard.'" Furthermore, "Many doctors advise that Kleenex Kerchiefs be substituted for ordinary handkerchiefs when one has a cold." And so one proceeds with the body from head to foot: "Gets-It is approved by doctors as safe and gentle."

When Feasley thumbed the lexicons and brought forth "halitosis," the sale of dictionaries to advertising agencies must have grown by leaps and bounds. A yeast concern says over the drawing of a pallid, haggard citizen, "Just making the motions—a victim of cachexia (run-down condition)." An insurance company has discovered a polite word for constipation. The Listerine agency, having put over "halitosis," tries to do the same for a fancy synonym for dandruff. The orange growers are emphasising acidosis, probably because it rhymes with halitosis. What a great field there must be in the advertising profession for any one with a new idea.

The difficulty of evaluating advertising copy in these modern times is an evidence of the changing situation. The modern agency supports by evidence the claims for the products produced. The documentation is secured through carefully combing the scientific texts, through consultation with scientific authorities, through the use of the questionnaire—and answering questionnaires seems to be a favorite pastime of many physicians—and through the securing of actual trial of the products by tremendous numbers of physicians. The presentation of such evidence often seems an exaggeration of conditions as they are, yet the evidence is almost invariably actual. No doubt physicians have been somewhat too ready to accept broad generalizations in the field of hygiene. They seldom require the same kind of evidence in support of a cleansing agent, a dietary product or tobacco that they would demand in support of a new remedy. Hence the promoters are easily able to secure the necessary

number of medical endorsements. Fortunately the situation may take care of itself: the overdoing is certain to result in reaction. But if the great minds in the advertising agencies are wise they will begin to reconsider now. Otherwise the good is likely to be lost with the evil.—A. M. A., Jan. 7, 28.

TOBACCO

Nearly every community in the world is involved, in some way, in the tobacco problem. In 1921 the people of the United States spent approximately \$1,500,000,000 on tobacco; many persons, who feel that there is a moral principle involved in human consumption of tobacco, have joined organizations for mass attacks against the practice. In some localities legal strictures have limited the sale of the plant in any form.

A session of the International Antitobacco League was held in Prague in 1927. Recently Prof. W. E. Dixon of Cambridge University delivered, in England, the Norman Kerr lecture, on "The Tobacco Habit." In the United States, a report of the Committee to Study the Tobacco Problem has just been published in book form. Unfortunately, the reaching of helpful conclusions after reading these and other articles is difficult. Presumably the reason is that the facts are difficult to establish. Many variables confuse investigators. A given set of determinations may not apply in another investigation. Tobacco may be snuffed, chewed or smoked, and, if smoked, it may be in the form of cigaret or cigar, or may be stuffed into a pipe. The amounts of nicotine in smoke vary with the thickness of cigar or cigaret; with the dampness, the tightness of packing or rolling and with the rapidity of combustion of the tobacco. In pipe smoking, the amount of nicotine at the mouthpiece is affected by the length of the stem and the presence or absence of a filter or catalyzer. Samples of tobacco are not more alike than are the susceptibilities of individuals. The amount of nicotine in the smoke may not bear any theoretically predictable relation to the amount in the tobacco.

Furthermore, although the main effect of tobacco smoke is due to nicotine, other substances, such as ammonia gas, pyridine, pyridine derivatives and carbon monoxide, must be taken into account. Controlled conditions, therefore—one of the prerequisites of scientific work—are difficult to produce.

Nevertheless, it is known that nicotine causes stimulation, followed by depression, of both the central and the autonomic nervous systems. Because of its influence on the autonomic nervous system, tobacco modifies motion and secretion of the alimentary tract. Smoking has a demonstrable effect on pulse rate, blood pressure and the efficiency of the heart.

Nearly everything that comes in contact with the body, however, modifies its functions in some manner. What the world wants to know about tobacco is whether it is harmful, harmless or beneficial. To answer this question, it is necessary to avoid reasoning, without reservation, from the analogy of nicotine injections in animals to the effect of tobacco on man. Clinical opinion must not be confused with clinical fact, or any kind of opinion with experimental demonstration. That much remains unknown must be recognized. For instance, the role of tobacco in causing certain circulatory disorders and, possibly, sudden death in some persons, remains to be investigated further. From the present available evidence the main conclusions that are justified seem to be the following: The use of tobacco even in moderate quantities seems to lower the efficiency of the heart under strain. This may be classed as a harmful effect. Taken moderately, tobacco tends to stabilize responses to sensory stimuli. This may be classed as a beneficial effect. Other effects depend on individual susceptibility, kind and condition of tobacco, method of taking it and amount consumed. Even tobacco amblyopia seems not to bear any relation to excessive use of the plant. Until more is known, the only general rule that can be given applies to those who feel ill effects from tobacco. Obviously, such persons should be guided by the advice of physicians who have made thorough investigations of their particular cases.

A. M. A., Feb. 10.

Expressed Oil

PEEPS INTO THE LIVES OF RENOWNED PHARMACISTS

By L. J. Snyder



Hon. Obidiah M. Goopus

Although Mr. Goopus is of an oleaginous nature the burden of the pharmaceutical world sits heavily upon his shoulders. Think, said Mr. Goopus, of the thousands of homeless little atoms wandering from cathode to anode, yet never arriving at a state of peace and equilibrium. Is anything being done about it? Are there any laws being passed, cried Mr. Goopus. No, and furthermore it seems I am accused of having written "Annie Laurie". Well, continued Mr. Goopus, shouting, what of it, what if I did—she never answered.



Prof. Lucifer Helzafyr

The first intimation the World had that Prof. Helzafyr would come up with a bang was observed one day when he was found rubbing together some potassium nitrate and glycerine in a mortar. Later he was advised to go West but not having a compass he sat down. During the Great War Prof. Helzafyr was captured by the Germans but was immediately returned with thanks and two stale pretzels. He was later shipped home C. O. D. via the Erie-extra fare train and arrived well oiled in Bump, Ky., his home town. During his sojourn in Europe, Dr. Helzafyr came to the conclusion that most men died from lack of breath. He also advanced the fact that relax is better than exlax or for that matter carpet tacks. Prof. Helzafyr in addition to being a great scientist is quite a hunter. He has bagged such specimens as the Wampus cat, Chinese Waffle Hound, Aunt Emma, the epsom minded Professor and the rare Wang bird. The Wang bird the Prof. has-tens to explain, flies backwards at night to keep the wind out of its eyes.



Uremia P. Sqizzel, Ph. G., LL. D., F. O. B.

Dr. Sqizzel has the honor of being the only pharmacist carrying the degree of F. O. B. (full of bull). As is well known the Dr. is the originator of those two well turned phrases, "What's yours?" and "No, we ain't got none." Asked about his opinion of the future of Pharmacy, the Dr. stated that since Pharmacy has been behind before besides that what was before behind would become in front of behind before which proves he continued that if all the discarded soda-straws were placed end to end the Druggist would be more than a Merchant.

Gargissima M. Bumfuddy

Folks, meet Prof. Bumfuddy. He was born, according to his own report, very young, near the Suez Canal, and other points south, but in spite of this he later became a Pharmacist. Prof. Bumfuddy has degrees from W. R. U., Harvard, Princeton, Yale, Vienna, Hoboken and Sing-Sing. Upon graduating from the last place he was heard to utter, "I've been thrown out of better places than this," showing the magnanimity of his mind. Prof. Bumfuddy for the past several years has been interested in research work upon lohochs and linctuses. His latest book, "Short Cuts to Ruin, or What To Do With Your Old Razor Blades," will soon be off the press.

**Clancy F. Glutz**

Mr. Glutz will be remembered as the husband of that famous prima donna, Sophie Glutz, however Mr. Glutz has not a few honors in his own name. He is credited with having found that there are 10^{-7} coughs to the carload; he also claims to have walked a mile for a camel, but upon arriving there and seeing none he returned. We learn from no other's lips than Mr. Glutz's that the best way to poison flies is to catch hold of the critters in their unguarded moments and prying open their mouths with a fork, stick or automobile jack or whatever else is laying around and is handy and to force bichloride down their throats. This, he adds in that quaint way of his, will usually fix 'em.

**Zacharia D Squirt**

Zacharia D Squirt was graduated from Podunk University in 1850, taking his master degree and the measles in 1879 and his doctorate in 1904. In addition, he also took several overcoats. Dr. Squirt's thesis on "Who Took the First Pill and Why" was proclaimed a succes by all who heard it and even more so by those who hadn't heard it. Dr. Squirt was also the first to discover "Anti-Knocking Serum" with illustrations by the author and guaranteed not to rip, tear or pull out at the heel (names furnished upon request). As a climax to his most noted career, Dr. Squirt is now engaged in studying "The Companionate Life Among the Boluses, or What Causes Mercury to Scoot."



COLLECTED DATA OF THE AVERAGE DRUGGIST

He dispenses sassprella sodas at his fountain.

He sells asburn tablets.

His sales on choclit are good.

Most salesmans give him a pain.

That the alcohol he sells won't hurt your radiator, he assures you.

His joy is to fill perscriptions.

He thinks that only registered druggusts should be allowed to own stores.

The Senaters who are responsible for the tabacca tax, he thinks, should be lectro-
cuted.

Most of these stores handling carmul pie, spugeddi, horseredish sanwitchuz should be forced out of bizznuss.

SAVE SUGAR

Druggist—"Put a few drops of this Spar-
kle in your eyes and they will rival Cleo-
patra's."

Flapper—"Oh, that's too much trouble."

Druggist—"No trouble at all. Just sprin-
kle it on your grape-fruit every morning."

S. O. S.

He—"Where can I find your husband?"

Druggist's Wife—"I haven't the slightest
idea. He said he was going down to an
N. O. D. A. meeting."

NOTES TO SODA DISPENSERS

Tomato puree can be made from small or
broken tomatoes.

Sandwiches cut on the bias present a
much neater appearance.

Eggs answering to the name of "peep"
are unsatisfactory for use.

Cheese having holes with a southerly ex-
posure is best adapted to fountain use.

Buns may be easily separated with a
cross-cut saw applied laterally to their per-
pendicular axes.

Alphabet soup contains all the letters of
the alphabet except X and Z and those end-
ing in long O and hard G.

F. O. B. DETROIT

The druggist's malted milk mixer would
run for a short while and then stop. He
tried in vain to fix it. "These spurt models
never were any good," he remarked as he
walked away.

NUMBER, PLEASE

And what the public needs more than a
good five cent cigar is a self-emptying tele-
phone booth.

Customer—Druggist, I've asked you
seven times to fill this prescription.

Ulysses S. Grant Drug Clerk—Sorry, sir,
I thought it was a joke."

A MILLION YEARS A MILLION DOLLARS

Ethical Pharmacist, after locking his
doors at midnight, "Well, another day,—
another dollar."

It has been suggested that more drug-
gists handle Ethyl gas.

P. S. It stops knocking.

LOCAL CHAPTER

Doctor's Wife—"My husband is a hypo-
chondriac."

Druggist's Wife—"Isn't that fine. Mine
is a Mason and a member of the N. O.
D. A."

OVEN BAKED

Mike—"Yez after looking a bit pale to-
day."

Pat—"Shure, it's the benzoate."

"SAVE THE SURFACE AND YOU SAVE ALL"

"This is going to be a good paint job,"
said the druggist as he sold the lady three
boxes of rouge.

THE BARBER'S ONLY RIVAL

"I'd like a fifty-cent tooth brush."

"How about tooth paste?"

"I have plenty, thanks."

"Could you use some mouth wash?"

"Bought some yesterday."

"Need talcum powder?"

"No, thanks."

"Razor blades?"

"Plenty."

"We have a special price on backache
plasters this week."

"Couldn't use them."

"Just a minute, sir, wouldn't you be in-
terested in a bottle of Humpty Badel's
Squintessence of Squatdrops, good for
coughs, pains, ingrown toe nails, falling
arches, hot and cold sliding doors, or what
have you, if any?"

"\$\$\$\$!!!!!!&&&"&&***** ** && NO!"

KEY OF B \flat

The druggist looked furtively upon the pestle and mortar which he held in his hand; then he broke out in song, "I'll be rubbing you, always."

UNSUNG HEROES

The druggist who had to make Milk of Asafetida, Iodoform Ointment, Lead Plaster, Tincture of Valerian, and Phosphorous Pills in the same day.

NOW IT CAN BE TOLD

Some find difficulty when watching the younger generation to tell whether they are necking or dancing. It's easy, mes enfants. If they don't move they're dancing.

FROM THE ROSETTA STONE

Fresh Soda-jerker, dispensing a Coca-Cola to a hard-boiled customer, "C'mon, Socrates, here's your Hemlock."

U. S. P. DOSE

"This is the limit," remarked the druggist, as he placed one drop of Croton Oil in the mortar.

SNAP COURSE

Oleo—"I understand George failed in all his subjects but Chemistry."

Resin—"Why didn't he fail in that?"

Oleo—"He didn't take it."

N $_2$ O

Then there's the one about the Scotch druggist who put Lux in his sodas so they wouldn't shrink.

WE DO NOT CARRY DOGWOOD

And then there's the one about the vegetarian druggist who wouldn't even handle animal crackers.



A Dollar is all that is necessary to bring—
THE RESERVE PHARMACON

Just Mail in Your Name and Address with \$1.00

You'll understand why the Early Bird catches the worm

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Address

City

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Established in 1877

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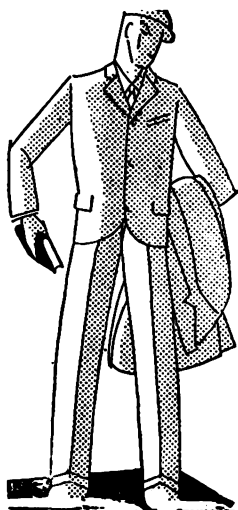
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649 Prospect Avenue

The Reserve
Pharmakon

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THE DRUG STORE AS A HEALTH UNIT

By William W. Hosler, Instructor in Pharmacy

For the past several months, anyone reading the various drug magazines has been aware that each issue contains from one to several articles dealing with the chain stores, the decline of the independent druggists, the menace of the "cut-throats", the growth of the lunch business, the increase in numbers of "dispensing" doctors, and other things which would give the general impression that the drug business isn't what it used to be.

Let us stop a moment and consider. Education, pharmaceutically, is on the up-grade, and does not point downward, or toward some of these black forecasts. Within a few years our pharmacists will all be college men, having their Bachelor's degrees from reputable schools, many of these schools being integral parts of our great universities. Pharmacists are doing research, they are proving their value as analysts, and the larger hospitals are finding that a real service is being rendered in their dispensaries and pharmacies, which makes the hospital pharmacist indispensable.

This newer generation of trained men is opening and operating real drug stores, becoming important units in a great health service, where physicians may send their prescriptions with confidence that they will be correctly and intelligently compounded, and where a person may go for direction to health clinics, physicians, hospitals, etc. Stores of this type are doing real prescription business, they are supplying the public, hospitals, and physicians with the newest and best supplies and medicaments obtainable.

These stores do not worry about cut prices and lunches. The sooner patent medicines, especially of the cure-all type, are sold in regular patent medicine stores, by cheap help, to the gullible portion of our population, the better. These things do not fit into the scheme to put pharmacy in its proper place among the professions. Our real pharmacists can then operate real pharmacies, with what I might term as ethical side-lines, since that term has long been used in connection with our profession. The things I have in mind are the various supplies now obtainable in our better stores,

and it is for the purpose of discussing a few of these that this article is being written.

The importance of real drug store health units to a community, to its hospitals, physicians, and individuals, cannot be over estimated. Prescriptions, biological products, arsenicals, ampoules, insulin, bandages and gauze, sick-room enamel and glassware, baby and invalid foods, rubber goods, chemicals, and many other items of importance are to be found in this type of store. The success of these stores is noticed by all, and more and more the profession gains.

One hundred and thirty years ago, Jenner showed that man could be protected against smallpox, one of the most loathsome and disfiguring, as well as at times fatal, of diseases, by vaccination with cow-pox or vaccine virus, taken from a calf with natural Cow-pox. Almost everyone is now familiar with the way this vaccine virus is obtained by inoculating calves, and after full development, how it is collected and placed at the disposal of the physician, almost stamping this disease from modern ailments. Today, the great importance of biological products has been established, and these stores keep supplies, properly refrigerated, always available.

Just as smallpox vaccine was the first product of its kind used for prevention of disease, so was diphtheria antitoxin the first of these aids to be used for the cure of disease. The value of this antitoxin has been so well proven that it seems hardly necessary to more than mention it. In addition to the antitoxin, which is used as a curative, or for quick protection, (the immunity produced is passive, and consequently of short duration), we now have the skin test, known as the Schick Test, and toxin-antitoxin mixture, used for the immunization of those who are susceptible to diphtheria as shown by the Schick Test. The test is now a recognized procedure by many health boards, and diphtheria epidemics among school children are becoming a thing of the past.

In the late war, wonderful results were obtained by immunizing the troops against typhoid, and that menace, which had caused the most of the fatalities in the Spanish-American War, was almost wiped out. Tetanus antitoxin prevented many cases of lock-jaw from wounds. Large industries at present protect their injured workmen with this antitoxin.

Similar to the diphtheria products, we have the scarlet fever products, the results of the work of Drs. George F. and Gladys H. Dick, in the Dick Test, and also Streptococcus Toxin, and Antitoxin, for immunizing and curative does. Splendid results have been obtained with these products.

Many Bacterial Vaccines, or Sero-bacterins, as they are sometimes called, are being used with varied success against diseases caused by various bacteria. Cases of colds, abscesses, acne, pneumonia, gonorrhea, whooping cough, meningitis are being treated with these preparations. Much research is being done on this type of bacterin, and results are encouraging.

Occasionally symptoms of poisoning occur after the administration of antitoxic serums; emphasis should be laid on the fact that these symptoms are not caused by antitoxin, but are due to hypersusceptibility to the proteins of the horse serum. For severe cases of serum poisoning atropine and epinephrine, hypodermically, may be used.

Many people are affected, to greater or lesser degrees, by afflictions characterized by sneezing, rash, inability to eat certain foods, etc. These conditions are often due to hypersensitiveness (allergy) toward certain proteins. We have a class of preparations known as Pollen Allergens, Pollen Extracts, Pollen Antigens, and Allergic Protein Extracts prepared from the proteins of various substances suspected of causing these various affections, and intended to be used for diagnosis, prophylaxis, and treatment of these conditions. Those preparations made from the proteins of pollens, and used in hay-fever, have been the most in vogue, and some good results in desensitizing individuals have been obtained. Other protein extracts used have been obtained from hair and epidermis of animals, from purified proteins of biologically reactive foods, etc.

At the present time several preparations of *Bacillus Acidophilus*, and the *Bacillus Bulgaricus*, are on the market. In the form of the milk, broth cultures, and chocolate coated agar block cultures, they are sold for cases of indigestion, constipation and kindred ailments. Results seem to point to the fact that the administration of lactic producing organisms aids the growth of the nor-

mally present aciduric bacteria in the intestinal tract, so as to make them the predominating organisms, to the exclusion of those causing fermentation, dysentery, and other disturbances. Liberal quantities of carbohydrates, such as lactose and dextrin, are usually given in conjunction with these preparations. The tablets, once in vogue, are practically all discontinued, since the organisms do not remain viable as in the above mentioned preparations.

Large quantities of arsenicals are being sold to physicians for administration in the treatment of syphilis. These preparations of arsenic used intravenously come under the Federal Law governing serums, etc., and are subject to the same control. Arspenamine, known also as 606, was first made by Ehrlich, and was his 606th attempt to produce an arsenic compound which would be toxic to the spirochetes, but not to man. Other names for this product are Arsenobensol, Diarsenol, and Salvarsan. The Neoarsphenamine is a modified soluble compound which is much easier to administer. Sulpharphenamine, sodium cacodylate, Stovarsol, and Tryparsamide are other organic combinations of arsenic now being used.

The use of ampoules is increasing each day. Their use saves time and insures a sterile solution. Many substances, such as pituitrin, salicylates, iodides, epinephrine, ergot, etc., are being used in this form.

Druggists should supply the physician with the volumetric solutions, bacterial stains, test solutions, and laboratory apparatus he uses in his clinical diagnosis, and then supply the materials to him, or the patients, for subsequent treatment. The Drug Store is a Health Unit, indispensable to the community, and an integral part of it.

SCHOLARSHIP MAN RECEIVES APPOINTMENT AT UNIV. OF ILLINOIS

Albert Ensign Knauf, holder of the faculty scholarship for the past 3 years, has recently been appointed Assistant in Chemistry at the University of Illinois. In addition to his teaching duties he will continue the work for his Ph.D. degree in Chemistry. He will work under the direction of Dr. Roger Adams who is known for his work on platinum block as a catalyst, polyhydroxymethyl-anthraquinones, local anaesthetics,

and the structure of chaulmoogric acid and the preparation of its analogs. Chaulmoogra oil and esters of chaulmoogric acid are used in the treatment of leprosy. Dr. Adams and students have recently succeeded in preparing nontoxic analogs of chaulmoogric acid which have a much higher bactericidal action against *Bacillus Leproe* than the original acid.

Mr. Knauf completes the work for his M. S. degree in chemistry, this summer. The school of Pharmacy is indeed proud of Mr. Knauf, his fine record of the past and his promise for the future in the service of Pharmacy as a profession.

WHAT IS CLEVELAND COLLEGE and WHAT IS IT DOING?

By A. Caswell Ellis, Ph.D., Director of
Cleveland College

It was thought that a college had been reduced to its lowest terms when some one said that the great teacher Mark Hopkins on one end of a log and young James A. Garfield on the other would constitute a college. Well, President Vinson, President Howe, and the Cleveland College Board of Trustees went that formula at least two better, for they started Cleveland College without either a Mark Hopkins or a log.

Cleveland College opened without any buildings, grounds, faculty, director, library, laboratory, equipment, or endowment of its own; in fact, without even a stadium or a football team—without any of the supposed *sine qua nons* of college success!! They borrowed a faculty and an acting Director, rented a down-town loft at Twentieth and Euclid, employed one professor of Business Administration, borrowed the Case and Western Reserve Laboratories in the evenings, got about sixty generous citizens to underwrite it for a loss not to exceed thirty thousand dollars per year, borrowed the McIntosh fund of ten thousand a year and opened for business.

Now, less than three years later, Cleveland College has 3200 students, which enrollment is about 500 more than that of Adelbert, the College for Women, Case, and John Carroll combined. About 500 of these students are college graduates with A.B., B.S., M.A., Ph.D., M.D., D.D.S., and other degrees from about a hundred of the best American and foreign Universities. A thou-

sand more have had from one to three years of college training, 1300 have completed high schools, while about 400 of the adult students do not even have high school diplomas.

In order to comply with the Ohio laws, it became necessary to secure a \$25,000 endowment and the title to a certain amount of buildings and grounds. Miss Ellen Scripps generously donated the \$25,000, and Western Reserve gave Cleveland College the legal right to the protection of her endowments by taking it into the Western Reserve system as "Cleveland College of Western Reserve University", on the same basis as Adelbert College, and with a Board of Trustees and funds of its own, just as is the case with Adelbert. The original affiliation with Case was, however, retained, so that Cleveland College is in effect the down-town college of both Case and Western Reserve, intended primarily to serve adults after the usual business hours. Four members of the Case Board of Trustees, five of the Western Reserve Board, and six other prominent citizens of Cleveland constitute the Board of Trustees of Cleveland College.

What now is Cleveland College? Is it a glorified business college? Is it a night college? Is it a part-time college? Is it a place in which those who had no early opportunities may get a little college education after work hours? Is it simply a down-town branch, offering Case and Western Reserve courses at convenient hours and places? Is it a junior college? It is all of these and "then some", as the boys would say.

Cleveland College offers about thirty courses in Accountancy, banking, finance, retailing, business organization, management, salesmanship, advertising, personnel psychology, and other phases of business administration. These may be taken just as few or as many as one needs, or may be taken in proper sequence and amount and culminate in the degree of B.B.A. or M.B.A., both of which degrees are granted by Cleveland College. This year 594 students are carrying on about 900 hours of business administration.

Through the use of the Case laboratories and Case professors, with one addition, Cleveland College is instructing in the evenings between three and four hundred stu-

dents in the various aspects of engineering, electrical, radio, roadway, sanitary, mechanical, metallurgical, civil, and aeronautical. Similarly, through the use of the chemical and biological laboratories and faculties of Western Reserve, about three hundred students are given night courses in chemistry and biology.

In Cleveland College, students are not only allowed to follow their own interests and take just the courses that they desire, but are encouraged to do just this. It may surprise you to know that under this condition of freedom more cultural than vocational courses are taken. There are many more registrations in English and literature alone than in all the courses in business administration combined. There are more in history and the other social sciences than in all the engineering courses combined; and more in psychology, or modern languages, than in home economics.

There are more than two hundred courses offered this year, and, of these, less than a hundred are in such vocational studies as business administration, engineering, journalism, library science, home economics, and parental education. The cultural courses are in art, music, English, literature, drama, speech, foreign languages, history, mathematics, sciences, economics, government, sociology, and psychology.

There are ten full-time Cleveland College teachers; forty-nine part-time teachers from Western Reserve; twenty-six from Case; twenty-two from the Cleveland School of Education and the staff of the Cleveland Public Schools; and from one to three each from the Cleveland Art School, the Museum of Natural History, The Red Cross Teaching Center, the Child Guidance Clinic, the Nutrition Clinics, the Health Council, the Juvenile Court, the staffs of the great daily papers, the educational departments of the White Motor Company, the Cleveland Trust, and other important Cleveland institutions.

Classes were given the first year only from 5:30 p.m. to 10:00 p.m., but now they are going from 9:00 a.m. to 10:00 p.m. It was found that many married women desired classes in the morning and early afternoon hours, and that there were many able local high-school graduates who could neither get into the local day colleges nor go off to college. The four local day col-

leges can accept less than a thousand students per year, while about 6500 graduate each year from the local high schools. To meet the needs of those who could neither get into the regular day colleges nor go away to a college, Cleveland College has opened a junior college during the morning hours. This year only the freshman subjects are given. Next year the sophomore courses will be added. There are 148 full-time students registered in these courses this year.

While it is recognized that an enormous service is done for this community by making available to adults and serious-minded young high school graduates the usual vocational and cultural courses of the standard day college, it is also felt that this by no means solves the problem of providing the education of college grade needed by adults. The idea of educating adults is so new that as yet no one knows exactly what that education should be. Certainly the educational needs, the motives for study, the mental background and mental processes of adults are in many respects very different from those of college boys and girls. Adults would seem, therefore, to be in need of different types of subject matter, and different methods of organization, management, and teaching.

Cleveland College has plans for experiments in these fields that only await the funds needed to put them into execution. Already, even without funds, interesting new courses are being developed in parental education, through the co-operation of experts in psychology, nutrition, psychiatry, health, and home economics. Interesting new culture courses in the fields of music and drama are being worked out in conjunction with the Cleveland Orchestra and the Playhouse. A set of general survey courses in each of the great fields of human learning, intended primarily for laymen, has also been started. All of these are as yet in the preliminary experimental stage, but some of them seem very promising.

In the field of method of college teaching, two very valuable experiments were made this year. The aim is to develop a method that will accomplish the following four things:

1. Allow for the differences of ability, industry, and previous training represented in the class, and bring it about that each

student will be stimulated to work up to his ability—no more and no less. At present, the bright students loaf and the slow ones are soon lost.

2. Lead the student to assume a more active share in his own education. Now, students are too passive—merely receptive, waiting to be educated by the professor.

3. Develop in the student better methods and habits of study.

4. Develop in students such an interest in the subject and such a pleasure in study that they will go on studying voluntarily after the class is finished.

It is felt that both our present college lecture method and the method of text book assignment and quizz are largely failures in these four important regards. The description of the Cleveland College experiments would take us beyond the limits of this paper, but it can be said that a class in psychology this year taught by a new method, involving mainly supervised study, discussion, and self-examination, averaged 24 points higher on the final examination than a check class taught by the same instructor by the usual lecture and quizz method. Another experimental method in English succeeded in keeping all members of the class working to the limits of their abilities, without overworking the slow ones. Of course, it will take many years to develop satisfactory methods, but Cleveland College has at least seen its problem and is working at it.

It is hoped that beginning next year Cleveland College can offer to the members of each of the professions, law, medicine, dentistry, pharmacy, and the ministry, short graduate courses that will help them to broaden their training and keep abreast of the progress in their professions. In this, as in all other fields in which Cleveland College has no faculty of its own, it can only serve as a liaison officer to help in arranging to bring together the adults who need the education and the members of the several professional faculties who are the ones qualified to teach the courses. As the Dean of the School of Pharmacy has assured the the Director of Cleveland College of the willingness of the faculty of the School of Pharmacy to offer one or more courses next year for practicing pharmacists, it only remains to find just what course or courses are desired by the pharmacists of Cleveland.

This will be done at once.

Thus far Cleveland College has made a bare beginning. With proper support and guidance, it should in a few years have ten thousand students, add new vigor and efficiency to every profession and vocation in Cleveland, and broaden the point of view, widen the interests, and elevate and enrich the sources of pleasure of all capable of learning on the college level.

ALLERGY

By Lawrence J. Snyder

Before proceeding to the understanding of Allergy, it is necessary to be familiar with divers terms and phenomena upon which the subject of Allergy is builded; i.e., the relation of Allergy to Immunity, Anaphylaxis, Anaphylatic Shock, and a cognizance of such terms as antigens, antibodies, food-idiosyncrasies and hypersensitiveness.

We will not go into great detail regarding the previously mentioned terms save only to refreshen your memories of a few definitions.

Immunity in a large sense means resistance and more specifically, resistance to disease or the ability of an animal to successfully combat the pathogenic action of bacteria. Antigens are substances which stimulate the production of protective substances or antibodies. Thus in Allergy the white of egg or serum proteins when injected, act as antigens. Anaphylaxis appears the antithesis of Immunity, in that when an animal is given repeated injections of an antigenic substance, as horse serum or egg albumin or bacteria, the antibodies produced by the first injection are increased by each succeeding injection until eventually a high degree of immunity is established. Under certain conditions, however, the reverse seems to be true; a second injection will produce severe and even fatal symptoms, so that it would seem, instead of immunity a state of hypersensitiveness has been produced. Richet gave the name "anaphylaxis" meaning "without protection" because to him it represented the reverse of Prophylaxis. If a very definite reaction takes place when foreign proteins are injected leading to deleterious results such as spasmodic respirations, serum-sickness, partial paralysis or collapse the phenomena is known as Anaphylactic Shock, however we shall have more to say about this later.

As to the history of Allergy, the sources of information have not been as prolific as one might imagine for such an important subject; this may be accounted for by the fact that the practical application of Allergy lay dormant until comparatively recent years. Allergy, *per se*, has been known for a great many years and has been used to cover a broad group of illnesses due to proteins. Such terms as "protein-hypersensitiveness", "protein sensitization", "allergy", and "atopy"; the latter word meaning literally a strange disease may be regarded for all practical purposes by the pharmacist as synonymous. Similarly, the agents which cause this type of illness, and the remedies which are used in their treatment, have been given different names, including "allergic proteins", allergens "atopens", and "antigens."

The first case we have upon record was reported by one Botallus in 1565, in which he states that he had experienced headache, sneezing and itching of the nose upon smelling a rose. In 1577, Von Helmont described a seasonal case of asthma. Schneider and Benningeru working conjointly in 1673 wrote upon the subject of rose catarrh. It might be of interest to digress for a moment at this point to say that although these were the first men to record their observations clinically, the diseases in question, namely hay-fever and catarrh, are as old as antiquity, there being frequent mention of them in the writings of Aristotle, Plato, Plutarch and even Herodotus. Further, the records of most of these men are personal clinical observations, they, for the most part being afflicted with the disease about which they wrote. One might even say that the history of asthma, hay-fever and catarrh is the history of Allergy. But to return to dates and names. In 1819 Bostock, after a series of observations and somewhat crude experiments, recognized hay-fever as a clinical entity. In 1839, Magindre observed that if egg-albumen was injected into the previously sensitized eye of a dog or rat, the animal died; however he never put his newly found knowledge to any practical use. Blachley in 1856 experimented with various pollens, himself being a sufferer from what is now known as hay-fever and issued the statement that he believed that pollen was the offending factor in his paroxysms of sneezing and lachrimation. In 1894, Flexner, experi-

menting with dog serum upon other animals, found that upon the second injection, the animals always succumbed. The next year Richert observed that animals sensitized with eel-serum and given a second injection invariably died. This condition he called anaphylaxis, which term is still in use. In 1902 Dunbar confirmed Blachley's reports regarding pollens. Arthrus, the following year, observed that the injection of horse serum into sensitized rabbits produced gangrene and eventually death whereas the injection of large amounts of the same serum into normal animals caused no untoward symptoms. The next few years showed a heightened interest in almost all fields relating to Allergy. In 1904 Theobald-Smith found that guinea-pigs inoculated with horse-serum for the purpose of standardizing diphtheria antitoxin developed hypersensitiveness to subsequent inoculations. In 1905 Otto observed the same phenomena but attributed it to the effects of the serum rather than the contents of the antitoxin. Pirquet and Schick, the same year, observed that children seven to twelve days after an injection of serum developed certain symptoms such as headache, itching, nausea and to this reaction he gave the name of "serum sickness". Von Pirquet really introduced Allergy but under a false assumption, he using the word to designate a state of heightened sensitiveness to tuberculin induced by some change occurring in the body during post-uterine life whereas an allergic condition as in hay-fever and asthma is often inherited. In 1907, Rosenau and Anderson performed a series of experiments and later issued what they thought were definite postulates. They found that:

- (1) Hypersensitiveness once established was definite.
- (2) Hypersensitive state was transmitted from mother to offspring.
- (3) Offspring from sensitized mother were sensitive to first injection of horse-serum.
- (4) Single doses of horse-serum harmless to normal guinea-pigs, made them hypersensitive upon second injection.
- (5) Sensitiveness could be induced not only by animal and vegetable proteins but also by extracts of bacteria.
- (6) Sublethal doses of serum would not only desensitize a sensitive animal but would do so within a period of two hours or less.

(7) State of desensitization (or what they called antianaphylaxis) is not lasting and often disappears within a few weeks.

This is quite a list and although they were not all exactly infallible, they were at least a suitable foundation for further work to come.

In 1910, Doerr and Russ found that a sensitive state could be transferred from sensitized animals to normal ones by the injection of serum from sensitized animals. Since this year the greatest advances have come and the practice of Allergy and its methods are the result of the exhaustive work of Cooke which reached its peak in 1916, of Walker who is to Allergy what Erlick is to Organic Chemistry and finally Duke whose profound researches innovated a completely new impetus to this study and from whose work most of what we now know in the field of Allergy should be credited. So much for the history of this subject; research is still being maintained and fresh discoveries are being contributed from time to time and Allergy is fast becoming a very important phase of Medicine and incidentally Pharmacy.

As we mentioned before it is well to have a definite idea of certain characteristics of the terms relative to Allergy. Antigens we said, are substances which stimulate the production of protective substances or antibodies. All antigenic substances are protein in nature and conversely all proteins are antigenic except gelatine. Anaphylaxis is the result of antigen-antibody reaction but there appears a specificity of sensitiveness, that is an animal may be sensitive to one protein and not to another. Early writers believed that the union of the antigen and antibody took place in the circulating blood. Later writers, particularly Cook, and Duke, believe that this union of antigen and antibody takes place in the tissue cells from the fact that it takes 24-28 hours after intracutaneous injection to bring on sensitiveness whereas if the reaction took place in the blood it should be the sensitive state would manifest itself much sooner. This has been proved by blood being removed from sensitized animals and replaced with normal blood, yet the animals remain sensitized. Shock is believed to be caused by the union of an antigen and an immune body. Although the exact nature of the reaction is as yet unknown, several

theories have been advanced to explain the phenomena. That of Vaughn supposes that when a foreign protein is injected into the tissues, it is broken up by an enzyme or antibody present in small amounts in the body into a toxic and non-toxic portion, at first disintegration takes place slowly and the body is slightly or not at all affected. By the time the second injection is given, considerably larger quantities of the protein splitting substance has been elaborated, so that cleavage of a large amount of the protein takes place immediately and the liberated toxic portion at once gives rise to an anaphylactic condition. Experiments show that the second injection causes no symptoms unless sufficient time is allowed for this specific substance to be produced. If a second injection follows the first in less than six or eight days, there is seldom any reaction. Again, if a year or more elapse between the injections there is generally no danger of a reaction; by that time the excess of antibody has disappeared. The rare fatal cases so far reported have followed first injections of serums, presumably because the individuals were already hypersensitive. Recent research tends to support the view that the reaction takes place, as we have said, in the body cells rather than the blood. Relatively little is known chemically or physically regarding the agents which can sensitize human beings. Of course such substances as milk-egg, pollen, animal hair, feathers can be traced, yet infants made ill by milk can usually tolerate the gross constituents of the same milk. Patients are sensitive to only certain kinds of honey (buckwheat, clover) not to all honey. Injections of salvarsan have had violent reactions due to the infinitesimal amount of foreign body in the distilled water. The bulky constituents of meat, vegetables and fruit rarely disturb anyone. The less common articles of diet as radishes, onions, shad roe, caviar, paprika, buckwheat, etc., are much more apt to cause hypersensitiveness. In general, science is still at a loss to discover more than in a general way the causative factor in the agents which causes sensitiveness whatever may be the nature of the latter.

Allergy, in itself, may be found to fall into certain divisions of sensitiveness relative to the offending factors, whether general or specific. There are about six divisions:

- (1) Hypersensitiveness to Drugs
- (2) Hypersensitiveness to various Pollens
- (3) Hypersensitiveness to Animal Proteins
- (4) Hypersensitiveness to Foodstuffs
- (5) Hypersensitiveness to Bacterial Products
- (6) Hypersensitiveness to Colloidal Substances of unknown composition.

As to drugs, it has long been known that the same dose does not have the same reaction for every patient. Some people are able to utilize large amounts of alcohol, especially the white race over other races; yet in all cases, if enough alcohol is given, drunkenness will be one of the manifestations. When nicotine is given the symptoms are always dizziness, headache, vomiting and the action will be the same if the experiment is repeated. Regarding cocaine there are cases reported where as much as sixty grammes have been injected without deleterious results, in others one gramme has resulted in death. People that die from taking a small dose of a drug, die with the same symptoms as those dying of a large dose of the same drug. Many drugs which have a notorious reputation as heart depressants are simply drugs causing sensitization. Aspirin is a good example. Other drugs which induce idiosyncrasies are morphine, atipyrine, atropine, cocaine, salicylic acid, quinine, veronal, pituitary, salvarsan, bromides, mercury salts, arsenic, strychnine, iodides and especially the coal tar products. Doubtless there are many others, in fact, this is a most fertile field for some pharmacist to employ some much needed research. Little if none has been done by anyone in this direction and at present there is a dearth of any kind of information regarding the idiosyncrasies of various drugs. The symptoms of drug sensitiveness are urticaria, exzematata and conjunctivitis, however we shall have more to say about this later.

More work seems to have been done with regard to pollen sensitization than in the other fields. Blackley in 1873 showed that attacks of hay-fever are caused by the presence in the air of certain species of pollen, which on coming in contact with the nasal membranes give rise to attacks of rhinitis and conjunctivitis, sneezing, etc. He also found that the skin was hypersensitive to pollen in some people.

A definite explanation of the origin of hypersensitiveness to pollen cannot as yet be given due to the variance of facts. First pollen is not a good antigen. If injected into an animal it does not or only very incompletely sensitize the animal. It might be supposed that hay-fever patients are extraordinarily apt to be sensitized but this is not the case, because it has been found that hay-fever heredity factors play a large part. Of 504 allergies studied by Cooke and Vander Veer, 48.4% had familial allergic antecedents. Of 300 cases studied by Van Leeuwen, 50% showed hereditary factors. These men also showed that hay-fever patients were often sensitive to more than one pollen or to pollen and other proteins. They also showed that patients sensitive to a weed in one district may not be sensitive to the same weed in another district. There is also the fact that some individuals showed symptoms of hay-fever the very first time they came in contact with a certain pollen. This point seems to be strong evidence against the anaphylactic theory of hay-fever. Among the plants whose pollens give rise to hay-fever symptoms are the ragweeds, elder, cocklebur, pigweed, *Chenopodium alba*, spring amaranth, Western water hemp, sage, goldenrod, red sorrel, buckthorn, hop, various grains as wheat, oat, rye, the grasses as timothy, Kentucky, marsh, etc., and such trees as hickory and ash. Of course there are many others and the offending members differ with the locality and location. Certain patients react to different flowers, some to lumber, volatile oils, straw, straw hats and even perfume. There is a case of a patient who suffered every year with hay-fever beginning with the first of May. It was later discovered that on that day he exchanged his felt hat for a panama one.

Animal Proteins embody quite a large scope. It has long been known that some asthma patients show attacks of the disease if they come in contact with horses but DeBesche was first to appreciate the importance and bring it to general notice. He, himself, suffered from the disease and described his personal experiences of always having attacks upon entering a horse-stable. He injected horse serum into himself and as a result had violent attacks. Such men as Chandler, Walker, Coca, and Cooke in America, and Widall and his school in

France, Frugoni in Italy have greatly increased our knowledge concerning this form of hypersensitiveness. It is now generally admitted that certain numbers of asthma cases are caused by the inhalation of such substances as horse dander, dog hair, cat and rabbit dander, the wool of sheep, the feathers from pillows. Rugs, upholstery and draperies have been known to cause symptoms, yet none of these cases are as common as would be supposed. Friederberg made some exhaustive experiments on guinea-pigs in which an attempt was made to induce anaphylactic symptoms in sensitized animals by injecting extracts of horse dander. The results were very meagre and he became convinced that the hereditary factor played a large part. The skin also may become sensitized. Markley tells of a case in which a woman suffered with a skin affection on the neck and shoulders which resisted all treatment. It was found that she kept a guinea-pig in a cage and that when she cleaned the cage the animal was allowed to walk around her bare neck. The places on her skin, which in this way had been in frequent contact with the guinea-pig's skin and hair had become sensitized. The skin of other parts of her body were not sensitive to guinea-pig hair. After withdrawal of the animal, the skin affection disappeared. Some cases of asthma have been traced to contact with pets but as we mentioned before this is more or less a rarity.

With foods, however, there are many cases. Everyone knows or is acquainted with a case in which the ingestion of strawberries, lobster, crab, shrimps or eggs causes disagreeable or even serious symptoms, whereas others may eat any amount of these food-stuffs with no such effects. With reference to the Hebrew prohibition against the eating of pork, it is interesting to note that meat seems to produce allergic symptoms more than any other meat. The allergic symptoms present after eating the foodstuff are characterized by gastro-intestinal disturbances, urticaria or skin eruptions, hay-fever, asthma, rhinitis and sneezing. Other foodstuffs which cause allergic symptoms are: milk of various animals, beans, fruits, like apples, peaches and prunes, cereals, as wheat, oats, etc. Sometimes these are entirely specific. Babies sometimes are hypersensitive to cow's milk.

Feer mentions a case in which the duck eggs and no other eggs caused distress. Van Leeuwen found that asthmatics have a common intolerance to milk, butter and cheese and that 4% have a more or less intolerance for every foodstuff, hence they are only free from distress when fasting. From investigations carried on by Pagniez, Pasteur, Valery, Radot, LaRoche, Richet and St. Girens, it appears that asthmatics tolerate poorly those foodstuffs containing uric acid compounds (meat—fish—beans) and that all show a disordered metabolism, i.e., there is a limited excretion of uric acid after a purin-rich meal. These cases would necessitate a purin-free diet obviously, yet there are cases in which patients do not tolerate carbohydrate goods. Foods rich in purins are, in addition to what has been mentioned, soups, gravies, tea, coffee, chocolate and peas. Beef seems to give the least trouble of all foods and eggs and milk the most. The reaction does not last like in pollen ingestion and may be due to a specific chemical body thrown out upon the digestion of food.

Walker was the first to describe sensitizing properties to Bacterian Proteins. Many asthmatics suffer from chronic bronchitis and according to Walker these patients become sensitized to the products of metabolism of bacteria which causes the bronchitis. This view led to the introduction of autovaccines for such cases and the fact that some cases were benefited by this treatment has been held as a correctness of the proof of this theory. Cooke, however, proved that the same results could be obtained by the use of stock serums and this was later confirmed by Racheman and Graham.

Colloidal substances of unknown composition, whose presence in the air is due to climatic influences, is also a contributing factor.

We have spoken of the different agents causing sensitiveness. We shall now say a few words about the symptoms of reactions. As to general symptoms, shock is rarely met. There is usually a generalized itching, pain in the top of the head, pain in the lower spine, a feeling of total collapse in which patient imagines that he is going to die, the face and tongue swell, and the blood pressure drops, and the pulse becomes weak. The treatment consists of intravenous injections of epinephrine in $\frac{1}{2}$ cc. dose

of 1/1000 solution, or caffeine in 1 grain doses. Cooke reports a case in which a man had violent symptoms for which at first no cause could be found. Later, it was found that he had an idiosyncrasy for glue. The mere licking of a stamp brought on symptoms of a shock.

The milder symptoms are: puffiness and itching of the eye-lids, redness of margin and increase of lacrimal secretion, nasal secretion, cough, hoarseness, wheezing, pruritis, erythema, thickening of the skin and dermatitis, dizziness and sometimes renal colic. It should be remembered that 10 to 15% of all individuals are affected by Allergy. About 25% of chronic cases can be diagnosed by skin tests. As it is sometimes impossible to discover what the specific causative agent is, for the proper diagnosis the following procedures are advisable:

- (1) Obtain Family history.
- (2) Obtain Personal history.
- (3) Physical, lab. and X-ray Examination.
- (4) Careful observations made by the patient.
- (5) Effect of Adrenalin upon symptoms.
- (6) Specific tests (Cutaneous, ophthalmic, nasal, etc.

The proof of the diagnosis depends upon obtaining relief of symptoms by removal of the suspected cause.

Regarding the skin tests there are two types:

- (1) Scratch Method—Walker.
- (2) Intracutaneous—Cooke.

In the Scratch method of Walker, the foreign materials are in a dry powdered form and are applied to scarified areas on the skin and to this is added one drop of .1 N NaOH solution. The appearance of a hive, with pseudopods, surrounded by an irregular erythema, indicates a positive reaction.

Button reactions (hives without pseudopods are negative.)

In the intracutaneous method of Cooke standardized solutions in varying strengths are used and injected intracutaneously. The appearance of hives with pseudopods indicates a positive reaction.

There is still another method called the Simple Plate Method. One mg. of the suspected substances is placed in a dry powdered form on a large sterile plate. To each

powder is added .1 cc. of physiological salt solution. Stir the first solution to be used and draw up in a tuberculin syringe provided with a small needle. Inject .01 cc. intracutaneously. Wash the syringe carefully in each of the three separate vessels containing sterile NaCl solution. The syringe can then be used for injecting solution No. 2 and so on if the syringe is always washed thoroughly and if the vessels of NaCl solution are always in rotation.

In addition there is the ophthalmic test in which 1:1000 pollen solution is sprayed into the conjunctival sac giving a redness of the conjunctiva persisting more than five minutes the nasal test in which 1:1000 solution is sprayed into the nose with the resultant sneezing and swelling of the nasal mucous membranes; the inhalation test which is used for emanation test of feathers, hair, dander, etc., the inhalations causing sneezing. Duke reports a case in which the inhalations of birch shavings by a carpenter brought on violent sneezing.

Treatment consists in:

(1) Avoidance of the specific cause of illness, i.e. a patient sensitive to a whole egg was found having symptoms after removal of the egg from the diet. It was later found that he was sensitive to hen meat, but could not tolerate rooster meat. Again, such factors as pollen, essential oils, foods such as tomato, onion, and cabbage, etc., animal products such as dander and wool, drugs as aspirin and morphine, house dust, smoke bacteria, should be sought for.

(2) Avoidance or removal of contributory causes; i.e. such physical factors as light, heat, cold, mechanical and chemical irritants should be taken into account.

(3) Specific protein treatment — The practical development in this line is due to early investigators: Curtis, Dunbar, Noon, Freeman, Lowdermilk, Rachmann, Walker, Cooke, Goodale, and others. Treatment of this form consists of three methods:

(1) Whole pollen of small rag weed, large rag weed, and golden rod are equally mixed, ground finely, suspended in solution, and used for inoculations. The dose is 1 mg.

(2) Several pollens are weighed out separately in 10 mg. lots and kept in waxed papers in a dessicator. Specimens of each are dissolved in solution and given in increasing doses, each patient being given the pollen to which he gave the strongest skin

and ophthalmic test.

(3) Each of some 20 pollens common in the district are ground up separately with sand in 5 gm. lots and suspended in a solution of 1% toluol. Extracts are chosen if the patient reacted strongly to a specific pollen in 1/1000 solution. Treatment begins in June, .1 cc dose being given of the solution and the dose doubled each day until .25 cc. of 1% solution are reached. When the maximum dose is reached, time is elongated to 6 day intervals up to the approach of the pollen season. Patients who fail to show symptoms after season is begun are considered cured. In addition, patients are advised to wear goggles, keep in downtown districts, avoid railroad trips, keep out of automobiles, and to keep windows closed in their homes.

Symptomatic treatment is useful for the pharmacist's information. It is one in which drugs are used; however, most drugs have been used with dubious results and few are worthy of notice. Among those of merit there is Adrenalin. It appears to be effective in all types of cases when applied locally in 1:1000 solutions. It causes the membranes to blanch and shrink. Subcutaneously, it is used in 1:1000 solutions at 5 minute intervals bringing relief in asthma. It can be used over long periods without deleterious results. Pituitrin has somewhat of the same effect as Adrenalin but it has the disadvantage of containing histamine. Atropine has been long used locally, subcutaneously and by inhalation. Ki has been used but the effect is irregular. Salicylates are sometimes effective and are used in 10 gr. doses every three hours. Morphine and cocaine are very effective but are habit forming.

By way of general summary we have the following things:

The numerous manifestations of Allergy such as hay-fever, asthma, dermatoses, urticaria can be treated along four lines, namely:

- (1) Avoidance of the specific cause of illness.
- (2) Avoidance or removal of contributory causes.
- (3) Specific Protein treatment.
- (4) Symptomatic treatment.

Avoidance or removal of the specific cause is the method to be used as a choice. Adrenalin and atropine are the most consis-

tent useful symptomatic remedies and are well adapted for emergency use and for temporary use while more lasting methods are being instituted.

The results of pollen therapy in the treatment of hay-fever and asthma are good.

Food cases can be best treated by the avoidance of the cause and the oral administration of the offending food in graduated doses.

And now a word or two in regard to the manufacture and preparation of simple protein products. They are designated, though not officially, as liquids obtained by extracting the dried pollen of plants and used for the diagnosis, prophylaxis or relief of hay-fever or pollinosis. There are several methods of preparation or extraction in use. Most of them involve a preliminary grinding of the dried pollen in order to break the cell membranes. The subsequent procedures include the following:

(1) Extraction by water containing phenol .5%. The resulting extract is standardized by determining the protein content.

(2) Extraction is done with 1% NaCl sol. and the extract is diluted with glycerine and NaCl solution until the final volume contains 60% glycerine.

(3) Extraction is done with NaCl sol. and alcohol added to make 12%; after 24 hours the mixture is centrifuged and the supernatant liquid drawn off. The resultant solution is 12% alcoholic solution.

(4) Extraction is done with NaCl sol. followed by clarification and filtration and then standardized upon the basis of pollen extracted.

(5) Extraction is done with 67% glycerine and 33% NaCl sol. and the total volume adjusted so that 1 cc is equivalent to 14,000 pollen units, the pollen unit being arbitrarily chosen as the equivalent of .001 mg. of pollen.

(6) Extraction is done with glycerine-NaCl sol. so that each cc. represents 10,000 units. Each manufacturing house supplying such extracts is furnished with a license number which appears on every package the same as on biologicals. These extracts are put up in 15-15 and 20 dose treatment sets. They are also supplied in graduated concentrations of 1:10,000-1:5000, 1:1000, 1:500, 1:100 and also in 5cc. graduated vials. Food extracts are prepared similarly to the extracts just mentioned and are put up in

graduated 5cc. vials.

Animal extracts are made by taking such substances as feathers, dander, or hair and extracting with .2% NaOH sol. and the protein precipitated. This precipitate is then redissolved and standardized by the chemical determination of protein nitrogen. Extracts come supplied in 5cc. vials. Manufacturers of these products are Parke Davis & Co., H. K. Mulford Co., The Arlington Chem. Co., Eli Lilly & Co., E. R. Squibb & Sons, Lederle Antitoxin Lab., The Upjohn Co., Swan-Meyers Co., U. S. Standard Products Co., Connaught Antitox. Lab., Terrel Lab. of Texas, Dr. G. H. Sherman of Detroit and the Beebe Laboratory of St. Paul, Minn. and others.

OUR SCHOOL INSPECTED

The American Association of Colleges of Pharmacy has started an inspection of its schools. The motion passed at the last annual meeting provided for an inspection once in three years. This year the plan is merely to inspect the Schools with which the members of the Executive Committee are connected and such schools as are adjacent thereto.

In accordance with this plan, Dr. Charles H. LaWall, Dean of the Philadelphia College of Pharmacy and Science, visited our School on April 30th. Dean LaWall arrived on an early train and spent a very busy day here.

He inspected the laboratories, class rooms, records, and budget, called upon the President, Vice-President and Treasurer of the University, addressed the student body, visited the Chemistry and Biology buildings and in short made a very thorough survey of us and our work. He met the entire Faculty and teaching staff at the 11:30 Assembly. He was entertained at noon luncheon in the home of the Dean. A dinner was given in his honor in the evening at the Wade Park Manor. This was attended by President Vinson, Dean Leutner, Dean of the University Administration, Mr. Sidney S. Wilson, Secretary and Treasurer of the University, Dr. R. W. Scott, Dean Spease and Professors Davy, Lankelma, Bacon and Chamberlin.

We were very glad to have Dean LaWall visit us and our latch string is out for him at any time in the future if he comes to Cleveland.

SELECTED

Conforming with previous issues, the PHARMACON selects the following article, because of its unusual significance, from the recent publications coming to our library.

THE PHARMACIST'S RESPONSIBILITY IN COMMUNITY HEALTH

By E. Fullerton Cook in the American

Journal of Pharmacy

Intelligent civilization thinks in terms of "better health" when planning for comfort, happiness and even prosperity. The number of agencies, public and private, directly co-operating in the maintenance or restoration of health, is startling, and the percentage of expenditures for this purpose, a large proportion of the cost of living. Within the memory of many living men and for the past four thousand years the physician and the pharmacist stood almost alone, shoulder to shoulder, in this struggle against disease. Today their efforts are supplemented by a vast number of national, State and local organizations including, in Washington alone, more than one hundred Government bureaus with substations in every important centre in the United States and its territories and possessions. In addition there are State and city health boards, food and drug administration bureaus, the Red Cross public health nurses' stations, tuberculosis clinics, baby clinics, physical development institutions and thousands of splendidly equipped hospitals and sanitoriums. Even the large life insurance companies are urging and freely supplying regular physical examinations for the detection of incipient disease and the popular literature of the news stand advises and inspires more sane living for better health.

In this gigantic program to advance the health of the nation, what part is being taken by the two original factors in public health promotion? It is time that pharmacy should frankly face this question and adjust its plans, if necessary, to work in full harmony with the scientific modern forces guiding these most vital activities. Those controlling the profession of medicine within the field of hygiene, diagnosis, surgery, research into functional and causative forces in normal and diseased tissue, and also in

applied, organized medicine may be commended for intense activity and notable advance. In pharmaceutical manufacture, in the establishment of standardized therapeutic agents, in the production of biological products, and in the synthesis of new organic drugs, the pharmacist is progressive and scientific and may be proud of the accomplishments. Now, in this modern program, which is not a theory but actually here, what shall be the policy and service which the trained community pharmacist should supply?

Through the working of natural economic laws the pharmacist must find his right place in this development and render a needed service, or automatically he will be eliminated. First, he must collect, manufacture and standardize in convenient and dependable form those products which have stood the test of clinical and laboratory trial and are known to be valuable therapeutic agents; then he must be trained, equipped and strategically located so that the physician and the public may obtain the prompt dispensing of these medicinals. Sometimes this service is best rendered in the hospital dispensary, but more often in the pharmacy, privately owned and controlled. He must also be prepared to supplement the treatment of the physician in the homes of his community by supplying, in addition to prescriptions, those other requisites to modern treatment; sterile solutions, the more simple clinical tests, sickroom supplies, biologicals, etc. His service to the public directly must also be in harmony with the professional status he assumes when co-operating fully with his physician friends. To maintain this position every one admits the need for excellent judgment and well-formulated policy, for the temptation to step outside of the legitimate field of pharmacy into that of medicine is constantly presented.

But here is where pharmacy finds its big opportunity to become an important factor in the national public health program. There are more than 50,000 retail pharmacies in the United States; they are strategically located so as to easily reach those who need help. The traditions of the community are such that the first place to go for advice and help in time of trouble is the drug store. Perhaps this is primarily so because it is free, but it would not continue from generation to generation and become traditional if the type of men in pharmacy during the

past had not proved their worth and met the need. To the pharmacy today the people go for help in sickness and in trouble; the potential possibilities for helping and serving are tremendous, and pharmacy must not now fail in meeting this confidence with wise and trained advice. The Charters' report, which scientifically studied the demands made upon the practicing pharmacist of today, found that everywhere the public go to the drug store for information—it is how to destroy insects, how to disinfect clothing or an outbuilding, how to pasteurize milk, and a thousand questions that have to do with the problems of living. The real pharmacist is the adviser on questions domestic, political, mechanical, postal and hygienic, and yes, often, therapeutic.

Here is the real problem! Pharmacy and medicine must ultimately reach the answer to this question. The pharmacist is not qualified nor authorized to recommend medicines for specific diseases. He properly sells simple home remedies the use of which is common knowledge, but there his function in this field ends. But neither is the physician authorized or qualified to dispense his own medicines; the best thought in medicine acknowledges that the physician who hands out ready-made pills and tablets in his own office cripples his real medical service. Here again there are legitimate exceptions, for the country doctor, miles from a pharmacy, must of necessity carry his medicines. Why should not pharmacy and medicine face these issues honestly, study the problem and adopt and promote a code of practice which will insure a program and teaching for the best interest of the public health, and that in the long run will surely work for the prosperity and growth of a legitimate and virile practice of medicine and pharmacy.

COOPERATION

You have all read the little article on Cleveland where the *Cleveland* before retiring at night always says, "Have I co-operated today?"

This article has nothing to do with Cleveland but is just to tell you of one form of cooperation now going on in Pharmacy that is indicative of future good.

A few years ago the National Association of Boards of Pharmacy divided the country into geographical districts and elected a Vice-President as the Chairman of each dis-

trict. Now the American Association of Colleges of Pharmacy has adopted the same districts and has appointed a Chairman in each district. This Board member and this teacher have cooperated and have called joint meetings of the Schools and Boards in each of these districts.

All the Schools and all the Boards in any District have met together in a central location for a two days' meeting. These small groups are creating a lively interest in things pharmaceutical and we shall hear from them in the future.

Our district, comprising Ohio, Indiana, Illinois, Wisconsin, Michigan and Kentucky, recently met in Chicago. State Board questions were discussed, the Illinois College of Pharmacy was visited, and many questions were discussed that will be presented to national convention this summer.

The Executive Committees of the Boards and Faculties met at the same time. Their discussion was of the proposed survey of pharmacy by people outside of pharmacy. You will hear of this later. All this cooperation can not be for aught but good.

Acquaintanceship comes first and real cooperation will follow.

HONOR KEY AWARDS

The following students will receive gold honor keys at the Annual Alumni Banquet at the Statler Hotel: James Neely, Roy Scott, Lawrence Baldinger, Myer Karner, Melverne Aldrich, and Vincent Stark. Lawrence Snyder, editor of the Pharmacon, will receive a special gold key for his fine work of the past two years as a pioneer of Pharmacy journalism here. These keys are presented by the student council annually to those students who earn a total of forty points in three years, or forty-five points in four years. Points are awarded in three groups; social, literary, and athletic. A student must earn points in two of the three groups to be eligible for a key. In the three groups are included class officers, committees, staff members, members of baseball and basketball teams, and student council members.

Earl Schwarzwaelder is now living at 1710 East 2nd Street, Tucson, Arizona.

The entire school sends their best wishes, Earl, and may luck be with you.

❁ Social News ❁

KAPPA PSI

By Charles Young

On Friday evening, May 4th, Kappa Psi Fraternity held their Dinner Dance at the Alcazar Hotel. This was by far the biggest and best party ever held by the Fraternity, there being about forty-five couples present. Graduating classes for the past several years were represented by Brothers, many of whom traveled long distances to be present. This is an affair that is looked forward to by all of the Alumni since it gives them an opportunity to again see the men who were their class-mates as well as to meet the men who are now in school. Ralph Blakeway was chairman of the committee that made all arrangements for the party. To him and to the other members of his committee we offer our thanks and votes of appreciation for the fine piece of work that they have done.

Mr. and Mrs. Chamberlin were present as chaperons and Dean and Mrs. Spease were there, doing their part to make the occasion a success.

On Friday evening, April 13th, three more men were taught the fuller meaning of Fraternities. At that time George Suntali and Benjamin Rozanski, Sophomores, and Alexander Celke became active members of Beta-Beta Chapter of Kappa Psi Fraternity.

Brother C. F. Grosse recently bought the Sord's Pharmacy at W. 25th and Detroit. We offer him our best wishes and hope that he may enjoy the prosperity and continue to conduct such a business as did our Brother Sords.

Brother Elmer Erhardt has bought the Walter's Pharmacy at W. 25th and Barber.

We are very pleased to announce that Brother Joseph Koci is again working at the Physician and Surgeon's Drug Store at 105th.

Brother Wade Wetzel of Amherst, Brother Forest Glenn of Mantua, and Brothers Geuss and Jewel of Warren were present at the District Meeting of the O. S. Ph. A. that was held in Ravenna, Ohio on Wednesday, May 2nd. Brother Young, an active, attended the meeting in the interests of the Reserve Pharmacon.

Brother Porter has devoted a great deal of his time to composing the Annual Sec-

tion of this Edition. He has done a good job and we take this opportunity to congratulate him.

Brothers Porter and Celke have been appointed as delegates to the National Kappa Psi Convention at Portland, Maine, August 17, 18, 19. This convention just precedes the A. Ph. A. Convention. They plan to drive through and remain for the A. Ph. Convention.

PHI DELTA CHI

By Lawrence Baldinger

Alpha Alpha Chapter of Phi Delta Chi fraternity held their annual Spring dance at the Women's Club on Friday evening, May eleventh. Thirty-five couples were present to dance to the rhythmic tunes of a syncopating orchestra. Dean and Mrs. Spease, and Doctor and Mrs. Bacon were chaperones at the dance. A representative group of alumni turned out for the affair; the dance being the last social function of the school year.

The chairman of the entertainment committee, in charge of the arrangements for the dance, was Henry Breck. Favors, in the form of a small leather pocket-book, with the fraternity coat-of-arms inscribed upon it and a silk handkerchief of the fraternity colors, were presented to the ladies.

NEWS

Alpha Alpha wishes to announce its new location, 11515 Mayfield Rd., next door to our former location. After a week of interrupted moving, during which we slept in one house and ate our meals in another, we finally succeeded in moving all our paraphernalia to the new house. Brothers Cook and Shane were instrumental in buying new rugs and furniture which have enhanced the beauty of, and stimulated more interest in the house. Although somewhat smaller than our former house, it is much more homelike and comfortable than the other.

Officers for the coming semester of the fall of 1928 have been elected:

Lawrence H. Baldinger—President
Robert Kumpf—Vice-President
Edgar Cantlon—Secretary
Earl Cook—Treasurer
Lon Lyman—Chaplain
Aloysius Kuchta—Sergeant-at-Arms
Nelson Schroeder—Guard
Sarl Cook—Steward

We will lose four brothers this year by graduation: Walter Wargell who will receive his Bachelor of Science degree and Donald B. Kessler, Rudolph Schreiner and Lawrence H. Baldinger who will receive their Pharmaceutical Chemist's Degrees. Brothers Kessler and Baldinger expect to return next year to work for their Bachelor degrees.

Brother Paul Grommol, who left school last year and who has been in California for the last six months, is now located in Sacramento, Calif. According to his last letter he advises us to stay away from the land of sunshine and flowers.

We wish to announce the initiation of Lon G. Lyman of Youngstown, Ohio, who trod the hot sands on April 9 and increased our active roll to 19.

ALPHA ZETA OMEGA

Ruben Green and Normand Kruger announced their engagements during the last few months.

Phil Lieberman, Morris Spiegel and Abe Amster got the road bug early this year. They have purchased new cars. Here's where A. Z. O. takes the air this summer.

Theta is represented at Western Reserve Medical School by Frater Samuel Krenitz.

Frank Lattin is sporting a new Special Studebaker "Commander", not bad, wire wheels 'nev' thing.

Theta has also been actively represented in athletics by Roy Scott, manager of the Pharmacy School basketball team, which won the Miami League and the Independent championships.

OUR PLATFORM

A FOUR YEAR MINIMUM
COURSE IN PHARMACY.
ABROGATION OF THE ASSIST-
ANT PHARMACIST.
DIFFERENTIATION BY LAW-
FUL ACT OF PRESCRIPTION
PHARMACIES AND NONETH-
ICAL PSEUDO-PHARMACIES.
OWNER-MANAGERSHIP OF ALL
PHARMACIES.
CURTAILING THE PROMISCU-
OUS SALE OF POTENT DRUGS
AS ASPIRIN, SANTONIN, ETC.
A MORE PRACTICAL CURRICU-
LUM OF COLLEGE STUDY.

Editorials

RETAIL PHARMACY

It is interesting to find that among those graduating there is a tendency for further education. By this we mean, that some not contented with having acquired a Ph.C. or a B.S. degree, are looking forward to the chemical, the analytical and the medical fields. With the thorough training that Pharmacy has already given them it is not difficult to visualize them later as successful leaders in their respective fields. "And what," you might ask, "shall this benefit Retail Pharmacy"? The answer apparently is—none, or at the best, very little, for Retail Pharmacy is as far removed from Professional Pharmacy as the "Cut-Rater" is from the Ethical Pharmacist. Retail Pharmacy can never become Professional Pharmacy until more educated men are incorporated into her ranks. Men not with three years' training but men with a potential scope double the fruits given by such a meager routine of study. Men, executive in nature and eager with the spirit of cooperation and coordination, men willing that Retail Pharmacy and Professional Pharmacy shall be synonymous.

FRATERNITIES

It is hoped that in future school years there will be a better understanding among the rival fraternities upon the campus. Fraternal friendship is a fine thing if rightly practiced and just as offensive if turned into other channels. After all, the school, its ideals and aims should come first.

NEW BUILDING

We have waited patiently the past two years for the appearance upon the academic horizon of a new building to house a new school, embodied with a keener faculty, a more efficient course of study and a more promising group of students than has ever before martialled themselves to meet Galen by the hand but somehow no edifice ever appeared. Why our more influential alumni have not been solicitous for its appearance is still an enigma.

STUDENT COUNCIL

Criticism if constructive is not always amiss. May we suggest that the Student Council accelerate its action a trifle more next year.

GRADUATION

The last sermonette from this department:—"Success consists in doing small things uncommonly well."

Alumni News

DISTRICT MEETING OF O. S. PH. A. AT RAVENNA

The druggists of Portage county were the organizers and hosts of a District meeting of the O. S. Ph. A. held at Ravenna, Ohio, on Wednesday evening May 2nd. It was held in connection with the supplementary meeting of the State Board of Pharmacy which was in session to pass upon the work done at the April examinations. A banquet was served at the Masonic Temple which was followed by motion pictures taken while on an African hunting trip by Frederick B. Patterson of the National Cash Register Company of Dayton, Ohio.

A trio of musicians from Cleveland was present during the banquet and it was they who opened the way for an evening of spirit and enthusiasm. Everyone present forgot his cares and worries for the evening and entered into the singing and laughing with light hearts.

Hale B. Thompson, of Kent, who was toastmaster of the meeting, devoted his untiring efforts to make the meeting a successful one. At no time did he allow the meeting to become tiresome as it often has at other similar meetings that we have attended. Every member of the State Board was present and each was introduced to the group. Sincere honor was paid to F. H. King of Delphos, Ohio, who is now serving his seventh consecutive term. Otto Mooseberger of Dayton, president of the O. S. Ph. A., was present as was Theodore Wetterstroem of Columbus, Secretary of the state organization.

This is another step made by the druggists of the state to become more closely united for the purpose of having a closer feeling among themselves and to have a keener insight in their profession. Words of appreciation and compliment were heard from everyone present as they renewed old friendships and made new ones. "The largest and best of the many meetings I have attended", said F. H. King after it was all over.

Dean Spease says that he has gone to

meetings in many parts of the state but never has he attended one which was so full of interest and enthusiasm as the one at Ravenna. If only the druggists from all over the state would turn out in such numbers to the state convention at Cedar Point in the summer there is no doubt that more could be accomplished than has been in the past. To Hale Thompson and his small band of fellow druggists from Portage county a great deal of credit and honor is due for the manner in which they arranged and conducted the meeting. May we hear of more such meetings in the future.

DEAN SPEASE BECOMES A RHYMSTER

Much to the surprise of everyone present at the District Meeting of the O. S. Ph. A. at Ravenna on May 2nd Dean Spease played the part of a rhymster. After making a few brief remarks by way of congratulating Hale B. Thompson of Kent and his committee for the fine program which they had arranged, Dean Spease brought peals of laughter and hearty applause, when the following was given.

On the second of May in the year '28,
Some pill rollers met, as I shall now relate.

Some belonged to the craft that is known
as Masonic,
So their club was the place for this fest
embryonic.

The reason for festing and over much eating,

Was because in Ravenna the State Board
was meeting.

Some folks of course said "now where is
this Ravenna?"

It's a town down in Portage not unlike
Gahenna.

Of course you all know that Gahenna is
"hot"

And I am not saying Ravenna is not.

This town for a meeting was chosen quite
wisely,

Because, it's the home of our friend Ralph
Knisley.

To locate it better, if your mind is so bent,
You will find it exactly six miles east of
Kent.

Hale Thompson of Kent engineered this
nice fest.

Of all I've attended this one is the best.
Hale told me in Warren, in the country
club hall,

"When you come to Ravenna you can't
talk at all."

So I've taken this method to outwit friend
Hale,

By writing bad jingles about this sweet
vale.

It is easy to find a rhyme for the Trum-
bull,

Because we have all known, and sold the
drug Sumbul.

But, the rhyme Portage county, with a
drug is a thing,

Which I leave to friend Hale with aid of
Ferd. King.

Now Ferdinand King is an old friend of
mine,

To Ohio druggists, he is like old wine.

The longer he serves upon the state
board,

The more we shall love him and gain by
his hoard.

Of practical knowledge that he has long
stored.

And of the good judgment that gave us
Nile Ford.

Upon our state board there are three
other men,

I must mention them before wiping my
pen.

The one from Lake Erie you all know as
Al,

In spite of great dignity, he is a good pal.

The one from Cincinnati you may call
Charles,

His job at conventions is to unravel
gnarls.

The last, but not least, is John Rutledge,
our Jack,

He never was built like the back of a
hack.

It is not so very hard for a rhymster to
sing,

Knisley, Rutledge, Ehlers, Flandermeyer
when the last word is King.

I should like to mention each one who is
here,

But Hale is too nervous for that, so I
fear.

I must bring these few lines to a right
speedy close,

And thank Mr. Woodhouse and all others
of those

Who have sat through its reading with-
out throwing dishes.

To the druggists of Portage I extend my
good wishes.

TRUMBULL COUNTY DRUGGIST'S ASSOCIATION

A meeting of the Trumbull County druggists was held on Monday evening, April 16th, at the Trumbull Country Club in Warren, Ohio. The meeting was called for the purpose of organizing and electing officers for an active branch of the O. S. Ph. A. More and more the druggists of the state are sensing the need for a stronger organization of druggists than now exists. Prof. Edward Spease, Dean of the School of Pharmacy of W.R.U., was present with his full assortment of enthusiasm and it was he who carried the message of greater organization to those men. His purpose was to impress upon those present that the druggists of the state and of the whole country must be stronger organized, since they as individuals can accomplish nothing, but as a unit through hard work they may raise Pharmacy to a higher level than it at present occupies. Prof. Spease also told of the extensive educational work that is being carried on in his school, such that Pharmacy in the future may truly be called a profession.

An election of officers was held at which time F. B. Piper of Niles, Ohio, was elected President. L. M. Voivod of Warren was elected Secretary.

After the meeting a buffet lunch was served.

Expressed Oil

EXPRESSED OIL HOW TO TELL WHEN THE MILLENNIUM HAS ARRIVED

When the Dean ceases to admonish the Freshman.

When the Kappa Psi-s love the Phi Delts.
When George Pauer gets to school on time.
When they stop medicating the school-alcohol.

When Professor Chamberlin declines to give exams with less than 2534 questions in them.

When the Student Council actually does something in the Assemblies.

When the Pharmacy School gets a new building.

NOW PLAYING AT THE PALACE

Prof. Chamberlin inspecting a pill mass student has been making:—"What's all this"?

Student—"Shh, not so loud, that's Lon Chaney"

SODA DRUGS SANDWICHES RX

Our idea of a master Druggist is the man who is running a cut rate "moth-balls to kewpee doll" drug store in an ethical-professional manner.

IT WON'T BE LONG NOW

Now that Sex Appeal is being called B. U. (Biological Urge) we wonder how many students will suddenly acquire an interest in Zoology courses.

PH 10-7

Prof.—In what direction does the reaction go—to the left or the right?

Student—To the right.

Prof.—Prove it.

Student — "Well — you know — "fifteen thousand atoms can't be wrong."

\$\$\$ and c c c c

Salesman (approaching druggist) "Of course you know Mr. Houbigant?"

Fresh druggist, "Say, I knew Mr. Houbigant when he didn't have a scent."

BRING YOUR OWN CONTAINER

Gentle hint to students who use more than 2 drams of alcohol to make one pill—"Big pints from little cc. grow."

FOR DEAR OLD RUTGERS

Our idea of the height of something or other is the Correspondence School student who hazed himself.

AND WOODEN NICKLES

Druggist, on an off-day, "All I get in this cash register is dust."

A LA GUINAN

More than one drug clerk is giving "the little girl a big hand"-out.

"THE FIRST FORTY YEARS"—

A critic tells us that the first 5 years are the hardest. Then, follows the sixth, the seventh, the eighth and so on.

IN THE BLUE BOTTLE

Teacher—"Willie, who was Philip the Great"?

Willie—Please, mum, he made magnesias.

ALL WE NEED IS \$999,999.96

All work and no play makes Jack a dull boy, but plenty of Jack makes all work play.

EVER TRY ETHYL?

Customer—I'll take a pint of kerosene.

Druggist (wrapping it)—Here you are.

Customer—Is it old fuel?

Druggist—No—what's that got to do with it?

Customer—Well, you know there's no fuel like an old fuel.

HA, HA—UP THE SLEEVE

When the Federal Narcotic Inspector visits your store, and looks over your reports and finds half an ounce of Codeine missing, BE NONCHALANT, LIGHT A MURAD.

AND HOW

OH, ETHICAL, ETHICAL, HOW MANY CRIMES ARE COMMITTED IN THY NAME?

THE WANG BIRD

"Yes, sir," remarked George Geflookus, who gets everything wrong, "it's the early bird that has worms."

The Following Feature Section

Has Been Edited and Compiled

by

ROBERT M. PORTER, '29

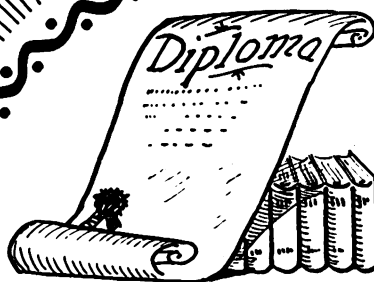
Hear Ye!

**“To know, and to know that you
know; not to know, and to know that
you do not know.
This is knowledge**

FEATURE SECTION

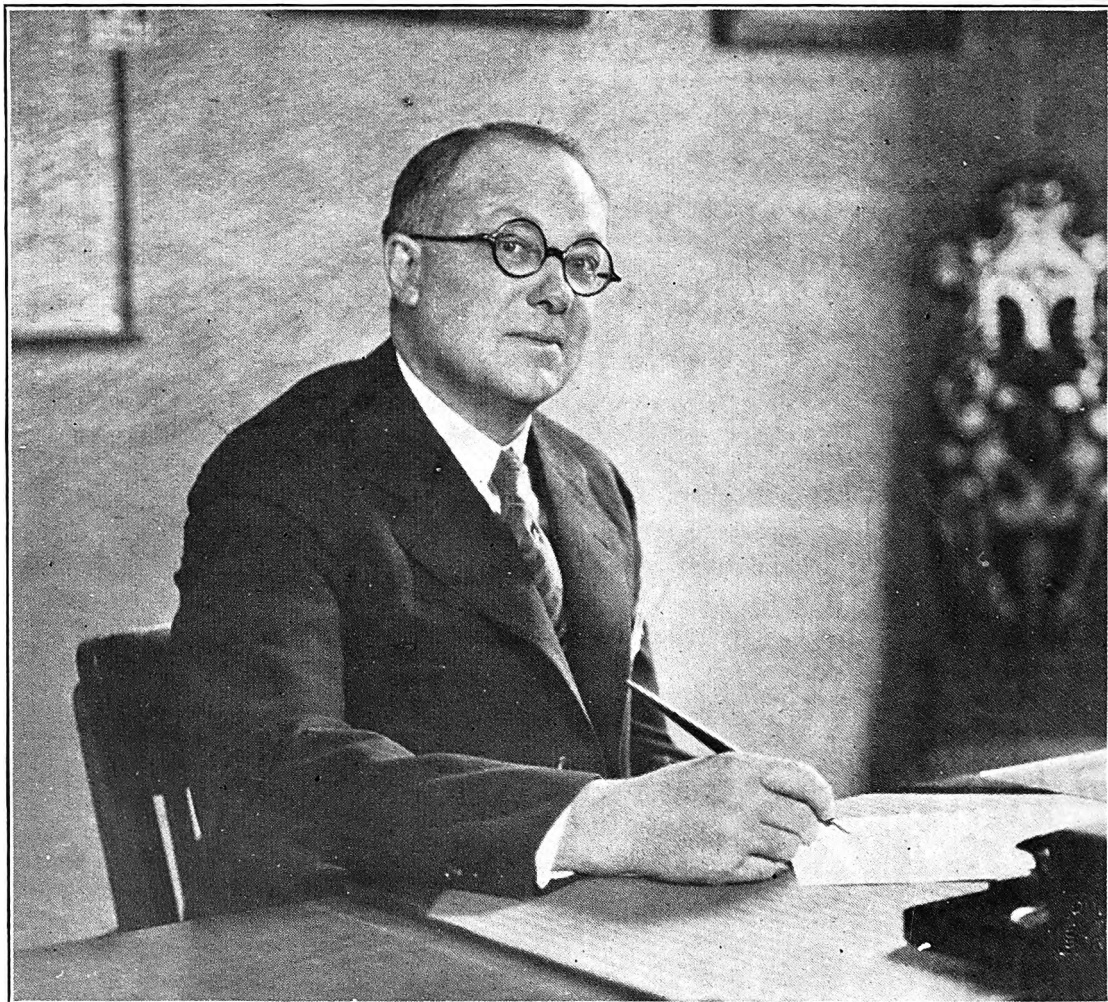
FOREWORD

As a corner stone
upon which to build
this section is
offered for your
approval
The Editor



GRADUATION NUMBER

DJ STARK



THE PHARMACON

Dean's Message to Our Alumni

This issue is the sixth copy of our little magazine that finds its way to you.

In the first issue in April, 1927, I tried to tell you what our object is in sending this little publication to you four times during the college year. I am now going to enlarge a little upon that explanation in just the same manner as our little magazine has enlarged upon its purpose. We want you to know exactly what it is and what it is for.

The Pharmacon is a student publication. It is not only published by the students but is partially paid for by them. Maybe some day it will become self-supporting. The student body contributes to the support of this magazine and the deficit is made up by the School. The advertisements help pay

THE PHARMACON RESERVE

for it and as yet some of them we realize are little more than gifts from our good alumni and other interested friends.

In this issue we are able to present a Student Annual. If you like this feature we hope it can be repeated next year.

When you Alumni were in college, did you ever have an opportunity to express yourselves in writing? The student now has this opportunity. He may write for the purpose of developing a theme, for the purpose of constructive criticism of the School or just for the purpose of practice in writing magazine articles. After he has written he has the benefit of receiving criticism upon what he has written.

How often have you read a magazine article or even a book which you would like to reply to or write about? Here the student learns how to do it. Here you members of the Alumni may even now begin. Why not try it and send in an article?

This is the medium for the exchange of School ideas and ideas pharmaceutical. It is our own little magazine and speaks for the Pharmacy School. If you go over its pages you can observe our progress. You can meet and hear from new faculty members. You can see which ones are growing old and whose hair is getting thin.

Perhaps you may find in these pages just the type of person you have been looking for.

Take Vincent Stark who is our artist. He is a retail druggist, student and one of the enthusiasts who has made our magazine attractive. He is a Benedict too, so observe how he thrives upon being busy. Then there is "Larry" Snyder; the Editor. He is one of those persons always too busy to sit down. He reads proof, writes jokes, editorials, runs his Studebaker back and forth from the printer and gets so excited at times that "bam" goes his muffler and all that left is a sheet of tin. What shall we do next year without him? By the way, he is likewise a Benedict. They have obeyed the poet, who said,

"When you start upon your journey,
While you're young and strong,
Look around and find another
Who may go along."

Robert Porter, our missionary luminary, has edited the "Annual" part of this issue. He is not a Benedict but we have hopes. There are many others here who can write and have written to you. We are past reaching the place where we cannot print all the contributions we receive, nevertheless the columns are open to you.

Have you something to say for the good of Pharmacy or for the good of the School? We feel toward the Pharmacon as did the poet toward his book when he wrote,

"A little book a friend may take
And kindly read for friendship's sake,
And if, perchance, he finds a bit
Of wisdom or a grain of wit
That suits his fancy here or there,
Such honors let me proudly wear."



PROFESSOR NEIL T. CHAMBERLIN

Little do we as students realize what a gap would be left among the boosters for student activities if we were to lose Professor Chamberlin. We all know that if we want to have a school function of any kind that the first step to be taken is to sign it up on Mr. Chamberlin's date book, but do we know the man himself?

Mr. Chamberlin, is a relentless worker on any project which involves the welfare and promotion of the students in the School of Pharmacy.

As chairman of the Student Activities Committee he has a wonderful opportunity to encourage or thwart the momentary impulses of an impetuous student body. You may feel assured that so long as your proposition is of a creditable nature Mr. Chamberlin will back you to the limit.

Did you ever wonder who the intercessor was between you and the large drug houses or who made visits to their plants possible? He is none other than the fatherly man with the office at the head of the stairs.

Did you ever take time to pay him a visit in his office? He will receive you cordially and with an open ear. Any suggestion for the betterment and promotion of extra curricular activities will be given his most careful consideration.

Mr. Chamberlin, as you all know is Faculty Adviser to the Pharmacon Staff. In this capacity he is a man made for the cause. Needless to state, he has given many hours of his valuable time to proof-reading, forethought, and composition of our prized periodical.

CLASSES



THE PHARMACON RESERVE

Official Title:

Lawrence Henry Baldinger

Synonym: "Baldy"

Habitat: Galion, Ohio

Purity Rubric: Phi Delta Chi, Pharmacon 2, 3.
Class Secretary 1, 2. Treasurer
Student Council 3.

Assay: Ph. C.

Identity: "A man of action."



Official Title:

Harry George Baskind

Synonym: "Baskind"

Habitat: Cleveland, Ohio

Purity Rubric: Alpha Zeta Omega
Ph. G. 1920

Assay: B. S.

Identity: "Sincere in all his deeds."

Official Title:

Albert Fine

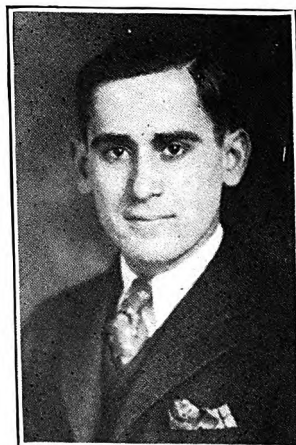
Synonym: "Al"

Habitat: Cleveland, Ohio

Purity Rubric: Alpha Zeta Omega, Pharmacon 2,
Class Treas. 3.

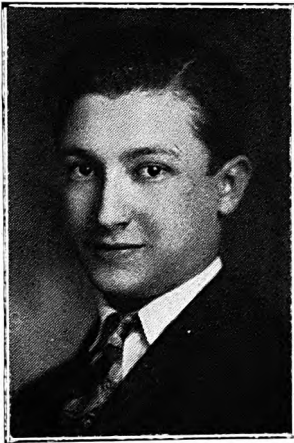
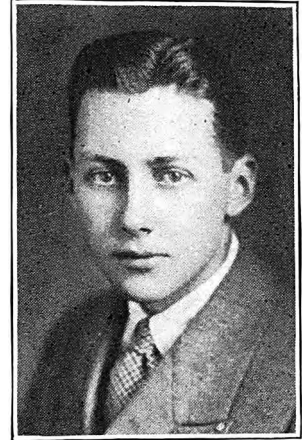
Assay: Ph. C.

Identity: "U. S. P. and N. F. Specialist."



THE PHARMACON RESERVE

Official Title:
Walter Fred Gerlach
Synonym: "Wally"
Habitat: Cleveland, Ohio
Assay: Ph. C.
Identity: "Laugh and the world laughs with you."



Official Title:
Isador Goldfarb
Synonym: "Goldie"
Habitat: Cleveland, Ohio
Purity Rubric: Class Baseball 1.
Assay: Ph. C.
Identity: "Short, Alert."

Official Title:
Gertrude Rose Horsch
Synonym: "Gertie"
Habitat: Cleveland, Ohio
Purity Rubric: Phi Kappa Omicron, Class Vice-
Pres. 3. Dance Committee 3.
Assay: Ph. C.
Identity: "A winning smile, a voice of gladness."



THE PHARMACON RESERVE

Official Title:

Donald Blair Otto Kessler

Synonym: "Don"

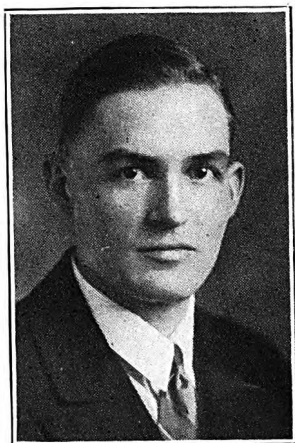
Habitat: Canton, Ohio

Purity Rubric: Phi Delta Chi

Class Vice-Pres. 1.

Assay: Ph. C.

Identity: "Obtaining his theoretical education."



Official Title:

Albert Ensign Knaut

Synonym: "Al"

Habitat: Salem, Ohio

Purity Rubric: Alpha Phi Delta, Pharmacon 3.
Student Assist. Organic Chemistry.

Assay: B. S.

Identity: "As constant as the Northern Star."

Official Title:

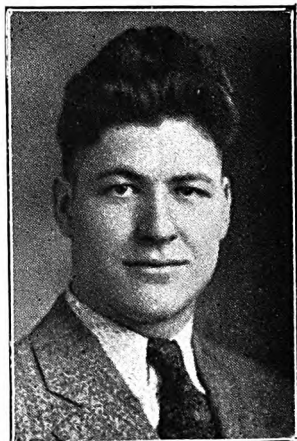
William Moody

Synonym: "Moody"

Habitat: Cleveland, Ohio

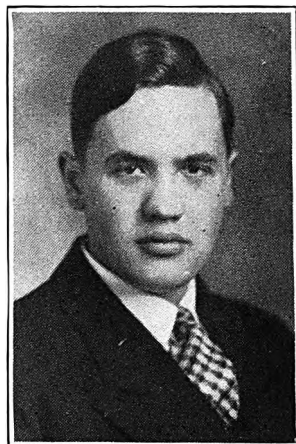
Assay: Ph. C.

Identity: "All great men are either dead or dying
and I don't feel very well myself."



THE PHARMACON RESERVE

Official Title:
Merle Whitmore Myers
Synonym: "Myers"
Habitat: Lodi, Ohio
Assay: Ph. C.
Identity: "Still water runs deep."



Official Title:
James Speer Neely
Synonym: "Jin"
Habitat: Mercersburg, Pa.
Purity Rubric: Kappa Psi, Class Pres. 3, 4, Student Council 3, 4. Pres. Student Council 4.
Assay: B. S.
Identity: "I'm the very pink of courtesy."

Official Title:
Rudolph Anthony Schreiner
Synonym: "Rudie"
Purity Rubric: Phi Delta Chi, Class Pres. 2, Student Council 2, Nihon 2.
Assay: Ph. C.
Identity: "A man's a man for a' that."



THE PHARMACON RESERVE

Official Title:

Vincent John Stark

Synonym: "Stark"

Habitat: Cleveland, Ohio

Purity Rubric: Artist, Nihon, Red Cat, Pharmac.

Assay: Ph. C.

Identity: "Originality finds expression."



Official Title:

Walter Fredrick Wargell

Synonym: "Walt"

Habitat: Cleveland, Ohio

Purity Rubric: Phi Delta Chi, Class Pres. 1, 3.
Student Council 1, 3. Nihon Board
3.
Student Assistant Pharmacy 3, 4.

Assay: B. S.

Identity: "For even though vanquished he could
argue still."

Official Title:

Charles Alexander Young

Synonym: "Charlie"

Habitat: Kent, Ohio

Purity Rubric: Kappa Psi
Student Council 1, 2
Student Council Vice-Pres. 1
Student Council Pres. 2
Class Pres. 1
Nihon Board 2
Pharmacon 3.

Assay: Ph. C.

Identity: "The world is a comedy to those who
think."



THE PHARMACON RESERVE

Official Title:

Alfred Francis Zarlengo

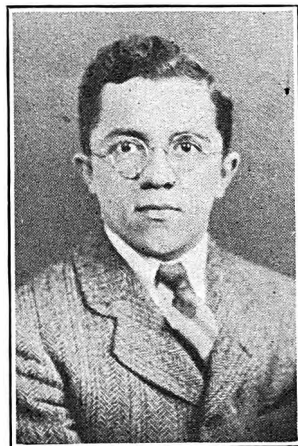
Synonym: "Tzar"

Habitat: Youngstown, Ohio

Purity Rubric: Alpha Phi Delta Pharmacon 3.

Assay: Ph. C.

Identity: "Let him alone, he hath business."



Official Title:

Milford Harris

Synonym: "Harris"

Habitat: Cleveland, Ohio

Purity Rubric: Alpha Zeta Omega

Assay: B. S.

Identity: "I have immortal longings in me."

Official Title:

Lawrence Jennings Snyder

Synonym: "Snyder"

Habitat: Cleveland, Ohio

Purity Rubric: Editor Pharmacon 2, 3.

Assay: Ph. C.

Identity: "The pen is mightier than the sword."

Official Title:

Peter Paul Palsis

Synonym: "Pete"

Habitat: Cleveland, Ohio

Purity Rubric: Student Council 3, 4.

Assay: B. S.

Identity: "One cannot estimate what there is in a quiet fellow."

Official Title:

Felix John Swiatkowski

Synonym: "Felix"

Habitat: Cleveland, Ohio

Assay: B. S.

Identity: "There's great ability in knowing how to conceal one's ability."



SENIOR CLASS

Class Officers

<i>President</i>	JAMES S. NEELY
<i>Vice-President</i>	FELIX J. SWIATKOWSKI
<i>Secretary-Treasurer</i>	WALTER F. WARGELL
	LAWRENCE SHEBANEK
<i>Student Council Representatives</i>	PETER P. PALSIS
	ALBERT E. KNAUF

The Class

HARRY GEORGE BASKIND	PETER PAUL PALSIS
MILFORD HARRIS	GEORGE STEVEN PAUER
ALBERT ENSIGN KNAUF	LAWRENCE SHEBANEK
JAMES SPEER NEELY	FELIX JOHN SWIATKOWSKI
WALTER FREDERICK WARGELL	

CLASS OF '28

We may well be proud of our Senior Class. These men are representative of that type of man who has sensed the need of a broader education. Baskind, Harris, Neely, Shebanek, and Wargell were not content with the degrees they had already earned and joined the ranks of '28 in search of a degree of Bachelor of Science. We are glad to know that several of them are planning on entering medical schools in the Fall, whereas several others are returning, or going elsewhere, to do graduate work.

The Class of '28 is a truly scientific group. With an even distribution of lances and reflux condensers among them we hope to hear of many noteworthy accomplishments ere many decades.

This Class will also have the distinction of being the last class to graduate from the School located at 2045 Adelbert Road. Even though we be in a new location we trust that every member of '28 will sense a feeling that is deep in the hearts of the underclassmen—"Gone but not forgotten".

JUNIOR CLASS HISTORY

The Junior Class is indeed but a shadow of the large group that entered School in the Fall of 1925. We entered Western Reserve University fifty strong, every member chuck full of all that goes to make a green, bewildered Freshman. Before our greenness had worn off, the Sophomores, along with the rest of the School, gave us a thorough initiation, one that will linger forever in the minds of those who participated. We were the recipients of burlap skirts, green painted legs and mercurochrome bedaubed cheeks, not to say a thing about the various drugs which permeated through our inner anatomy. Of course we all bought the traditional "Frosh" caps—no, we can't call it a cap—it would be a disgrace to a cap to even compare it with the article of buffoonery which was sold to us. Well, to make a long story short, we did not wear the caps very long. The Sophomores of course assumed the right to force us to wear the caps; but assuming and carrying out the right were two different things. They soon found out that the Freshman crew was a tough bunch. Our attempt to kidnap one of their number resulted in a free-for-all fight which attracted the attention of practically the whole University and won us due respect.

We elected Charles Young as President to lead us through our Freshman year. As President, he was entitled to a place on the Student Council and there expressed the views of the Freshman Class.

The remainder of the school year passed without any noteworthy events in which we figured prominently, and we returned in the Fall of 1926 for our Sophomore year with ranks sadly depleted.

Of course, we gave the Freshman the same as had been given us and we were abetted in our devilish plans by inclement weather which served to make the Freshman plight more severe. Rudolph Schreiner was elected President for this year.

During the latter part of this year the Pharmacy School publication, "The Pharmacon", was started and several members of our class put their shoulders to the wheel to help both in the business and editorial staff.

Again advancing through a machine-gun fire of harrowing difficulties we entered our Junior year and elected Roy Scott as President, who, although very busy, has been more than solicitous in the welfare of the Class.

The casualties in this Class have been very heavy and now only a handful remain. Some of these Juniors will graduate this June with a degree of Pharmaceutical Chemist and expect to leave school. Others are planning to return for a fourth year to earn a Bachelor's degree, while others are planning even beyond that for medicine or graduate work. Although we have lost many since we started as Freshmen, those who have remained have certainly upheld the honor of the Class.

We feel sure that in the future our members will reflect credit on the Class by their work, either in Pharmacy or allied sciences.

—Lawrence H. Baldinger.



JUNIOR CLASS

Class Officers

<i>President</i>	ROY I. SCOTT
<i>Vice-President</i>	GERTRUDE R. HORSCH
<i>Secretary</i>	PAUL S. STEIDL
<i>Treasurer</i>	ALBERT FINE
<i>Student Council</i>	ANTOINETTE E. SZCZYTKOWSKI
<i>Student Council</i>	LAWRENCE H. BALDINGER

The Class

LAWRENCE HENRY BALDINGER
 ALBERT FINE
 WALTER FRED GERLACH
 ISADORE GOLDFARB
 GERTRUDE ROSE HORSCH
 MORRIS KARLINSKY
 DONALD BLAIR OTTO KESSLER
 VINCENT PASQUAL MADDALENA
 WILLIAM MOODY
 MERLE WHITMORE MYERS
 MILDRED LOUISE PIRSON
 IRENE RUTH PIRSON

ROBERT MCKINNEY PORTER
 MAX RIEMER
 RUDOLPH ANTHONY SCHREINER
 ROY ISIDORE SCOTT
 CARL JOSEPH SHANE
 SISTER M. ADELAIDE
 LAWRENCE JENNINGS SNYDER
 VINCENT JOHN STARK
 PAUL STEVE STEIDL
 ANTOINETTE EULALIA SZCZYTKOWSKI
 CHARLES ALEXANDER YOUNG
 ALFRED FRANCIS ZARLENGO

"CLASS OF 1930"

(A drama in four semesters)

Time: Fall of 1926 to Spring of 1928.

Setting: A palatial edifice noted for its beauty of architecture and its historical reminiscences, set in the midst of a botanical garden of Myrica, Belladonna, Convallaria, Digitalis and the like. It has known better days!

Critics Report: A powerful melodrama dealing with an old subject, but transformed into a real masterpiece by its cast of brilliant and distinguished Pharmacists-to-be.

Synopsis: In September, 1926, the Freshman Class entered the Pharmacy School in quest of pharmaceutical knowledge. The Parke-Davis Trip soon impressed upon them the large scope of work which was to be covered under "Pharmacy". Their venture was not to be one of gayety alone, for obstacles began to arise, in the form of Chemistry, Pharmacy Math., Tuesday morning Assemblies, Sophomore Tactics and Dean calls. However, their hopes and ideals were not to be blighted and the end of the year found few defeated.

The Sophomore year proved to have a different aspect. Freshman determination was coupled with the pride and dignity of a Sophomore. The incoming Freshman Class was the victim of the vengeance which we vowed when we were Freshmen to take upon the upper-classmen. How could we forget the outrageous, infamous tasks we were subjected to, the year before.

During our Sophomore year we did our best to promote social activities. We furnished entertainment for the School of Pharmacy Dance at the Allerton Hotel. We featured the Hoffman Sisters and Eddie Gibbons as a form of novel entertainment.

Feeling that the most trying part of our work is completed, we look to the years to come with pleasant anticipation. Keep your eyes on '30!

—Emma K. Pejsa.

SOPHOMORE CLASS

Class Officers

<i>President</i>	MELVERNE ALDRICH
<i>Vice-President</i>	MAURICE COLE
<i>Secretary</i>	EMMA PEJSA
<i>Treasurer</i>	RALPH BLAKEWAY
<i>Student Council</i>	MYER KARNER



THE SOPHOMORE CLASS

The Class

GEORGE RICHARD KOCH
 MARY GENEVIEVE KONDASH
 ALVIN HENRY KUTTNER
 LON GESAMER LYMAN
 JULIUS JAY MILLER
 PETER ALBERT NESI
 GEORGE DAVID NOVATNY
 STANLEY LEO NOVATNY
 EDWARD PALEY
 EMMA KATHRYNE PEJSA
 BENEDICT GREGORY ROZANSKI
 PHILIP SAGINOR
 MAURICE SCHOENBERG
 SISTER JEANNE MARIE
 OTTO SPICUZZA

MELVERNE WILLIAM ALDRICH
 LUCILLE GORDON BICKFORD
 RALPH WILLIAM BLAKESWAY
 HENRY BRECK
 EDGAR CANTLON
 WILLS HATHAWAY CLINTON
 SAM SOL COHEN
 MAURICE HARDING COLE
 EARL T. COOK
 HENRY GALLAGHER
 MILTON EUGENE GEIGER
 LEO JOSEPH GRAHAM
 ERNEST TAFT GROSS
 JOSEPH JOHN JOIA
 MYER LOUIS KARNER

FRESHMEN

So this is college! So this is Pharmacy! So—but why go on enumerating the different sources of wonder that confronted us pop-eyed freshmen during our first days of school. We are now quite accustomed to the life and are well-seasoned college boys (and girls).

The Sophomores showed battle as regards to the wearing of the Freshmen caps, but few casualties resulted. Some of the more bold became meek after a certain automobile ride, in which the "Sophs" came in first. But wait until next year!

During the course of the year, a few of the less fortunate disappeared from our ranks. And so it is the cream off the top of the bottle that remains; cream that is really rich. We have been used with the sugar of the upper classes to flavor each of the outstanding events and activities of the year.

Our Class was right there when it came to athletics. Nagy, Kuchta, Celke, Schroeder, Valway and Fitch went out for the Pharmacy School Basketball Team and every one of them proved to be a real asset to the team. What's more, we know that they will all be in uniform when the season starts next year.

The Class of '31 has the qualities of cheerful fun and serious application in happy combine. It speaks uncommonly well for the future of these budding pharmacists. As the admirable advertisement would have it: "Watch us grow!"

—Otto L. Wolfert.

Class Officers

President EDWIN H. WHITTAKER
Vice-President ROBERT A. FITCH
Secretary-Treasurer RUTH KOTERSHALL



FRESHMAN CLASS

The Class

WANDA JEANNETTE BAYGROWITZ
 FRANCIS BIHN
 GEORGE LOUIS BRUEHLER
 ALEXANDER EDMUND CELKE
 MARY RITA DERDA
 JOSEPH DWORKIN
 RUFUS OLIVER FARRIS
 ROBERT ALEXANDER FITCH
 KENNETH FOY
 MARLE AGNES HOFER
 DAVID ISRAEL
 JOHN BENEDICT KALASINSKI
 ETHEL MARGARET KOLOZSVARY
 RUTH KOTERSHALL
 ALOYSIUS EDWARD KUCHTA
 ROBERT ARTHUR KUMPF
 SAMUEL LESTER
 JOSEPH WILLIAM McELROY
 BRONISLAUS ANDREW MICHALEC
 BERNARD MIDDENDORF

CASMER MISKIEWICZ
 LOTTIE MONTOWSKI
 JOSEPH ALBERT MORIARITY
 JOSEPH EMERY NAGY
 CARL VINCENT NATALE
 DALE OBERLIN
 OTHO JAMES OHLIGER
 STEPHEN WILKINS OSCAR
 ADELBERT PATRONSKY
 BROOKE KENNETH PHILLIPS
 MILTON RESNICK
 NELSON SCHROEDER
 LADDIE SEDELY
 WILBUR SMITH
 CLARENCE ALLEN SPEICE
 HARRY FREDERICK VALWAY
 BARNEY WEINSTEIN
 JACK WEINSTEIN
 EDWIN HURD WHITTAKER
 OTTO LEO WOLFERT



Ethel Kolszoway



Emma Pejso



Mary Kendall



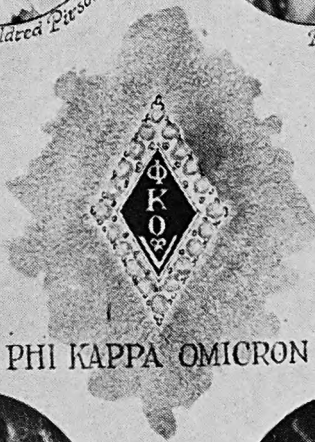
Milaree Pierson



Ruth Pierson



Gertrude Hoeck



PHI KAPPA OMICRON



Lucille Dickhaut

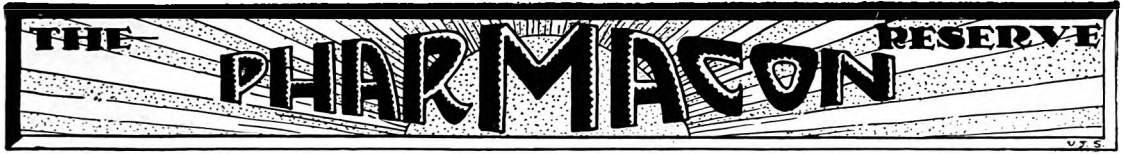


Rena Torgowitz



Anna Speershill

*Emma
Kendall*



PHI KAPPA OMICRON

Founded at Reserve in 1922

Honorary Members

Alice K. Spease (Mrs. E.) Adelaide E. Harris (Mrs. R. J.)

Monica M. Allen

Soror in Facultate

Esther M. Tyler

Sorors in Collegio

Nineteen Twenty-eight

Antoinette E. Szczytkowski

Gertrude R. Horsch

Nineteen Twenty-nine

I. Ruth Pirson

Lucille G. Bickford

Mildred L. Pirson

Mary G. Kondash

Emma K. Pejsa

Nineteen Thirty

Ethel M. Kolozsvary

Ruth Kotershall

Wanda J. Baygrowitz



PHI KAPPA OMICRON

The Phi Kappa Omicron Sorority was founded March 24, 1924. The girls of the School of Pharmacy with the aid of Mrs. Edward Spease formed the organization and drafted its constitution.

Its primary purpose is to promote good fellowship among the embryo girl pharmacists who have only in recent years noticeably invaded the much masculine field of Pharmacy.

Mrs. Edward Spease is honorary member of the Sorority. Mrs. Robert J. Harris and Miss Monica M. Allen are Faculty Advisors. The active members total the large sum of nine: Wanda J. Baygrowitz, Lucille G. Bickford, Gertrude R. Horsch, Mary G. Kondash, Ruth Kotershall, Emma Pejsa, Mildred L. Pirson, I. Ruth Pirson, Antoinette E. Szczytkowski and Ethel M. Kolozsvary.

The Calendar of the Phi Kappa Omicron Sorority for the year beginning September, 1927, is as follows:

October 11. **Theater Party for the Freshmen**

This was only a little act of kindness to put the newcomers off their guard, for the usual life of the freshmen was looming before them, although they were blissfully ignorant of the fact.

October 28. **Annual Hallowe'en Party**

The dance hall, alias assembly room, alias Pharmacognosy and Pharmacy lecture room, was decorated in black and yellow with pumpkins and corn stalks gracing the floor; even the smoking skeleton lent his graceful figure for the occasion.

November 22. **Pledge Dinner at the Hotel West Lake**

The affair was successful and pleasant—pleasant for the actives and alumanae present, but exceedingly uncomfortable and full of anticipated horrors for the pledges. It may be said that the horrors existed only in their minds, for they did nothing more terrifying than eat a good dinner and say a few words.

December 20. **Shower for Mrs. Joe Koci, formerly Miss Betty Cielinski**

The shower broke with the suddenness of an April down-pour on the head of Mrs. Koci, taking her completely by surprise.

Mrs. Harris kindly offered her apartment for the party.

February 17. **Informal Initiation of Pledges**

After a week of forced submission, the high spirited pledges were rather successfully bridled for the final "stab" at their vanity. Miss Gertrude Horsch generously offered her home for this occasion.

February 18. **Formal Initiation**

The formal initiation, with all its solemnity, took place at the home of Mrs. Spease. The Sorority has had the pleasure of performing this ceremony every year at Mrs. Spease's residence.

In the evening a formal dinner was held at The Alcazar. The Sorority feels that much of its success was due to the alumnae present. We wish to express the Sorority's appreciation for the support extended.

April 14. **Benefit Bridge Party**

The girls hoped it would be an attractive party—and it was.

May 25. **Formal Dinner Dance**

A Formal Dinner Dance at the Sleepy Hollow Country Club.

KAPPA PSI

Kappa Psi Fraternity was founded at the Medical College of Virginia on October 25, 1879. This fraternity was the first Greek-letter society established in the colleges of pharmacy in the United States. Kappa Psi is a strictly pharmaceutical fraternity which limits its chapters to the colleges of pharmacy holding memberships in the American Association of Colleges of Pharmacy. There is now a total of 70 chapters, collegiate and graduate, with a membership of nearly 10,000 scattered throughout the United States.

The local chapter, Beta Beta, was established in 1910 and has been one of the most active fraternities at Western Reserve University. The Kappa Psi house, located at 1619 East 117th Street, has been the scene of several rousing house parties this year. The first night of the school year a get-together smoker was held for the purpose of renewing old acquaintances and to promote a feeling of friendship and welcome toward the new students. This was followed by other smokers and dances given at monthly intervals. These social activities have been interspersed with talks by men connected with pharmacy who have brought to light many phases of pharmacy, which though instructive and beneficial are not included in the regular school training.

The active chapter, at the opening of the present school year, was composed of only eight men, Charles Young, Robert Porter, Ralph Blakeway, Melvern Aldrich, George Novatny, Lawrence Shebanek, James Neely, and Jack Axer. These men through hard work and perseverance have increased the membership to fifteen and it was only because of financial and scholastic conditions of some of the pledge men that the total was not greater. Five neophytes, Robert Fitch, Edwin Whittaker, Brooke Phillips, Joseph Nagy, and Harry Valway crossed the valley of burning sands and painted bluffs on the 17th of February. The other three pilgrims, seeing that their brother pledges had survived the trials and tribulations imposed upon them, decided to undertake the pilgrimage to Mecca. On Friday, the 13th of April, Alex Celke, George Suntala and Benjamin Rosanski set out with brave hearts, but trembling knees, to conquer the unknown.—They succeeded—. The departure of these men from the ranks of the pledges left Otto Wolfert, Kenneth Foy, Rufus Ferris, John Kalesinski, Stanley Novatny, and Wilbur Smith to form the nucleus of a new expedition which is to start over the great divide at the opening of the new school year.

With initiations over the chapter began work on the preparations for their annual May Dance. It was decided to make this affair a dinner party and dance combined. In the Spanish Room of the Alcazar Hotel on the night of May the fourth our efforts were rewarded. Arrangements had been made for forty-five couples and when the first course started every seat had been taken. After a well arranged dinner enlivened between courses by remarks from the toastmaster, Charley Young, who introduced the members of the faculty and alumni to the active chapter, the dancing began. Dean Spease showed the assembly that he knew as much about whirling a partner as he did about teaching freshmen how to reduce pounds to centigrams; Porter tried to show Celke "The Whiz" that he could shake as mean a hoof as he (Celke) could, and Bob Fitch surprised us all with new steps that we had never heard of before. The success of the party was evidenced by the fact that no one was seen to leave before the last notes of the "sax" died away.



KAPPA PSI

Beta Beta Chapter

Founded at Russell Military Academy in 1879

70 Chapters

Established at Reserve in 1910

Frater in Facultate

Edward Spease
Neil T. Chamberlin
Orlando J. Carner

Herman P. Lankelma
Paul R. Hudson
Franklin J. Bacon

Fratres in Collegio

Nineteen Twenty-eight

James S. Neely

Lawrence Shebanek

Charles A. Young

Nineteen Twenty-nine

Melverne W. Aldrich
Ralph W. Blakeway
George D. Novatny

Robert M. Porter
Benjamin G. Rozanski
George W. Suntala

Nineteen Thirty

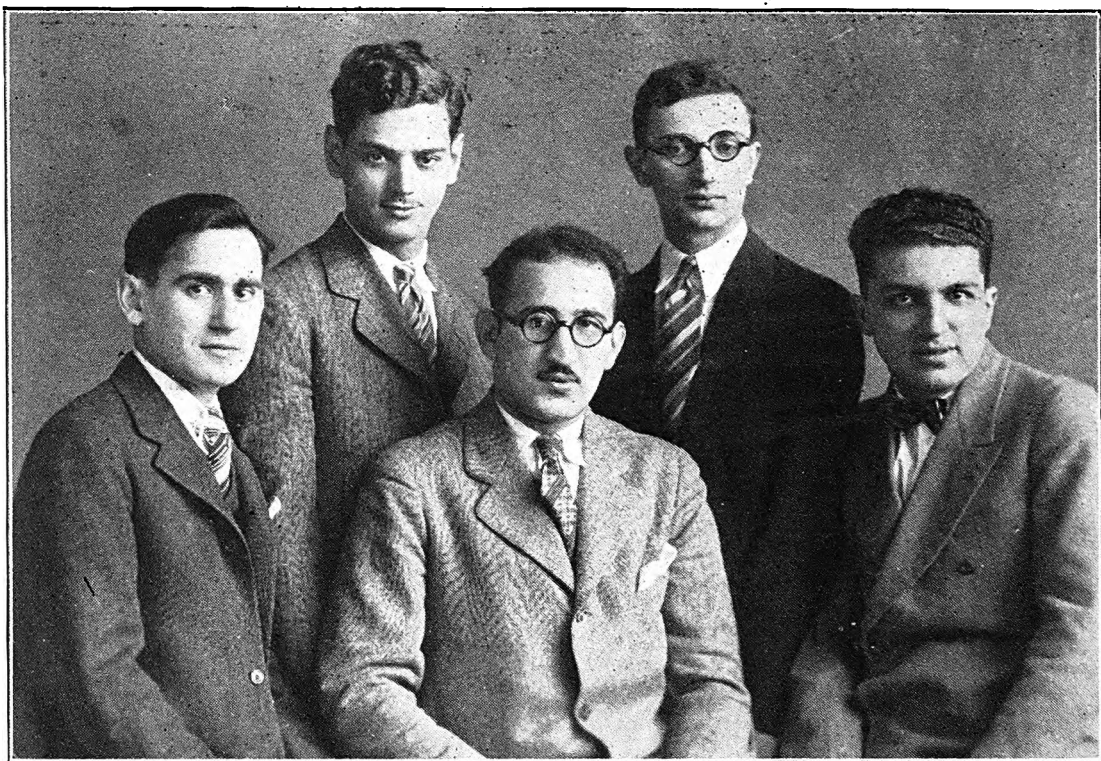
Alexander E. Celke
Robert A. Fitch
Joseph E. Nagy

Brooke K. Phillips
Harry F. Valway
Edwin H. Whittaker

Pledges

Rufus O. Farris
Kenneth Foy
John B. Kalasinski

Stanley L. Novatny
Wilbur H. Smith
Otto L. Wolfert



ALPHA ZETA OMEGA

Founded at Philadelphia College of Pharmacy in 1919

10 Active Chapters

Established at Reserve in 1926

Frater in Facultate

Louis Nelson Katz

Fratres in Collegio

Nineteen Twenty-eight

Roy Scott

Harry Baskind

Albert Fine

Milford Harris

Nineteen Twenty-nine

Morris Schorenberg

Ernest Gross

Pledges

Joseph Dworkin

Frater in Universitatis

Samuel Krenitz

ALPHA ZETA OMEGA

Alpha Zeta Omega received its start as an independent chapter under the banner of Alpha Kappa Upsilon.

It was an enthusiastic group under the direction of Dean Edward Spease that saw the launching of the new venture, a chapter in A.Z.O.

Max Cohen, our first president, has continued to do good work. It is gratifying to say that he has been one of the most active men in the fraternity's history.

In 1926, Frater Sless of Philadelphia, initiated us as a group into Theta Chapter of the Alpha Zeta Omega Fraternity. We at once became an important link in an international fraternity, having brother chapters as follows:

Alpha	Philadelphia, Pa.
Beta	Philadelphia College of Pharmacy
Gamma	Temple University
Delta	McGill University, Montreal
Epsilon	University of New Jersey
Zeta	Columbia University
Eta	University of Cincinnati
Kappa	University of Maryland
Lambda	University of Louisville

As has been our usual custom, Theta has been very active socially. A dance was given in honor of the pledges. The affair was held at the Park Lane Villa, under the able chairmanship of Frater Millard R. Berger. The pledges afforded the guests some amusement when they tried to empty eight ounce milk bottles. The prize, a beautiful toilet set, was won by Frater Ernest Gross.

On February 21, the Ritual took place, and pledges Harry Baskind, Albert Fine and Ernest Gross became fraters. A stag banquet was given in their honor at the Hotel Winton.

The annual Formal Prom was held March 16 in the beautiful Flamingo Room at the Alcazar. Novel entertainment including Bessie Brown, popular blues singer, and the original "60" Club Orchestra, were supplied by Frater Jack Baskind, chairman of the entertainment committee.

Several informal smokers have been held throughout the year and have been received with great enthusiasm by the boys. Their success is due to the able Norman "Schultz" Weintraub.

Under the guidance of Frater Max Cohen, Theta inaugurated a series of lectures which are given for the most part by the members themselves. Some of the topics discussed were:

"Introduction to English Literature" by Max Cohen, Oct. 31.

"Beowulf and Chaucer" by Millard Berger, Nov. 14.

"Classical Period" by Norman Weintraub, Dec. 12.

"Romantic Period" by Carl Kovacs, Dec. 21.

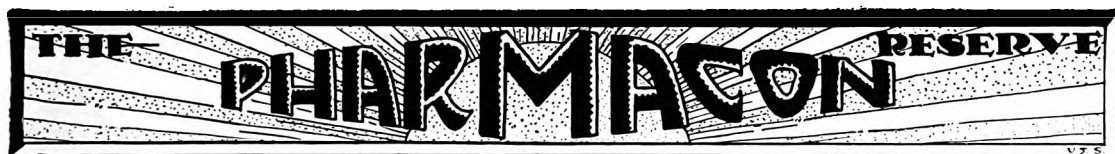
"Ephedrine" by Abe Amster, April 9.

"Shakespeare Period" by Mr. Axelrod, an outside speaker, Nov. 29.

"The History and Evolution of Religion" by Louis Gressel, April 23.

"The Modern Drama" by Phil Lieberman.

The regular meeting place maintained by the chapter is in the Euclid Apartments across from the Fenway.



PHI DELTA CHI

Alpha Alpha Chapter

Founded at the University of Michigan in 1883

30 Chapters

Established at Reserve in 1923

Fratres in Facultate

Edward Spease

William W. Hosler

Edward D. Davy

Walter F. Wargell

Russell Stimson

Fratres in Collegio

Nineteen Twenty-eight

Walter F. Wargell

Lawrence H. Baldinger

Rudolph A. Schreiner

Donald B. Kessler

Nineteen Twenty-nine

Carl J. Shane

Earl T. Cook

Paul S. Steidl

Henry W. A. Gallagher

Alvin H. Kuttler

G. Richard Koch

Henry Breck

Edgar Cantlon

Lon G. Lyman

Nineteen Thirty

Robert A. Kumpf

George L. Breuhler

Nelson Schroeder

Clarence Speice

Aloysius Kuchta

Adelbert Patronsky

Pledges

Laddie Sedely



PHI DELTA CHI

Phi Delta Chi, National Pharmacy and Chemistry Fraternity, was founded at the University of Michigan under the guidance of Dr. Prescott. At the present time the fraternity is composed of 30 chapters, one of which, Alpha Alpha, is located at Western Reserve University in the School of Pharmacy. This Chapter was established in 1923 under the guidance of Dean Edward Spease, who is an alumnus of Xi chapter of Ohio State University, and who is also Grand President of the Fraternity, at the present time serving his second year in this office.

Alpha Alpha started the school year of 1927-1928 with 12 active members: Donald Kessler, Carl Shane, Earl Cook, all of Canton, Ohio, Richard Koch of Columbiana, Ohio, Paul Steidl of Akron, Ohio, Michael Gayok of McKeesport, Pa., Lawrence Baldinger of Galion, Ohio, and Alvin Kuttler, Henry Breck, Henry Gallagher, Rudolph Schreiner and Walter Wargell of Cleveland, Ohio.

On December 16, we held our first social affair of the year, the annual pledge dance, at the Women's Club. All the pledges showed up with good looking girls, and enjoyed their first fraternity affair very much. Immediately following the Christmas vacation, the pledges, following a tradition started by the pledges of 1925-1926, treated the actives and alumni to a smoker and a big feed. Everyone enjoyed the party immensely and unanimously voted the pledges many thanks for the wholehearted way in which they turned out to make their last party as pledges a huge success.

Mid year exams and financial difficulties took their toll and we returned for the second semester minus an active and several pledges. On February 22, 23 and 24, seven pledges trod the hot sands and were initiated. Robert Kumpf, of Canton, Ohio, Edgar Cantlon, Adelbert Patronskey, George Breuhler, Nelson Schroeder, Aloysius Kuchta, Clarence Speice, all of Cleveland, Ohio, are the pledges who lived through a hectic fortnight and are now worthy brothers. Lon G. Lyman was unable to be initiated at that time because of sickness in the family, so a special initiation was held on April 9 for his benefit. Laddie Sedely was unable to be initiated with the first bunch of fellows on account of sickness, so at the present time, Laddie is holding down the pledge organization by himself.

The Grand Convention of the Fraternity was held in Cleveland this year on the 8th, 9th, 10th, 11th of February at the Hotel Statler. Many pleasant acquaintances were made with our brothers from far away states, which served to strengthen the fraternal bonds between the different chapters. At this time, the officers of the preceding year, including Dean Spease as Grand President, were re-elected to serve for another year.

This June we will lose by graduation four brothers: Walter Wargell, who will receive his Bachelor's degree, Donald Kessler, Rudolph Schreiner and Lawrence Baldinger, who will receive the degree of Pharmaceutical Chemist.

In the few years that we have been on the campus we feel that we have progressed favorably, have, made ourselves well known and that we have done our bit to boost Pharmacy.

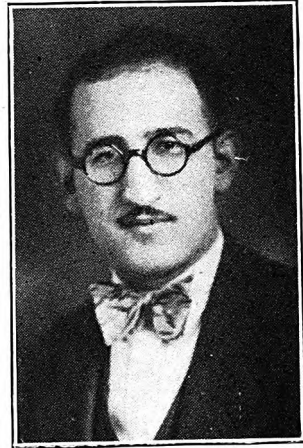
THE PHARMACON RESERVE



Vincent J. Stark
Art Editor



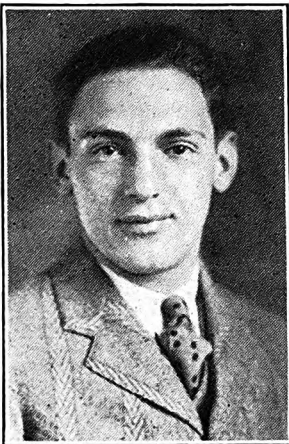
Robert M. Porter
"Annual" Editor



Roy Scott
Business Manager

THE PHARMACON STAFF

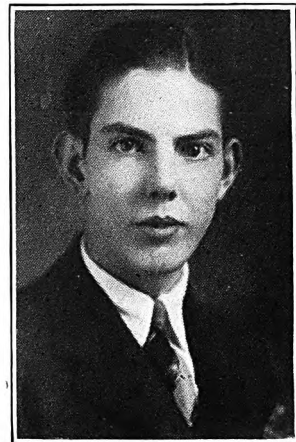
The "Pharmacon" first made its appearance in April, 1927, and has since appeared five times upon the campus. Credit for its success is due to the efforts of Professor N. T. Chamberlin, Vincent Stark, Roy Scott, Meyer Karner and Lawrence Baldinger. Lawrence Snyder, the present editor, terminates his office this June. Robert Porter, though absent from the staff on former issues, has compiled and edited the "Annual" portion of the June number of the Pharmacon.



Meyer Karner
Sports Editor



Lawrence Baldinger
Reporter



Ralph Blakeway
Ass't Business Mgr.



STUDENT COUNCIL

Nineteen Twenty-eight

James S. Neely, President
Peter P. Palsis

Albert E. Knauf
Lawrence Shebanek

Nineteen Twenty-nine

Lawrence H. Baldinger, Treas.

Antoinette E. Szczytowski, Sec.
Roy I Scott

Nineteen Thirty

Melverne W. Aldrich

Myer L. Karner

Nineteen Thirty-one

Edwin H. Whittaker

STUDENT COUNCIL

The Student Council is a very valuable part of our School machinery. We may well consider it as a medium of communication between faculty and students. On the other hand it serves as an organizing unit for school activities.

One of the first duties of each school year is the distribution of funds from the student budget. A definite percentage is allotted to the Pharmacon, the Basketball team, and any other activities involving the student body as a whole. This body also keeps a record of the extra curricular activities of each individual and awards an "R" Honor Key to those who earn the required number of points.

Along with Mr. Chamberlin the Student Council sponsored this Graduate Number of the Pharmacon to replace, to a certain extent, The Nihon (University Annual), which terminated after the publication of last year's book. Robert M. Porter was chosen to edit the Feature Section and work in conjunction with Lawrence J. Snyder in the production of the Graduate Number. It is the hope of the Council that we may edit our own annual next year. What say, Pharmics?

To be sure, we have not forgotten the Parke-Davis Trip of last year. A trip to The Eli Lilly Company was planned this year but sad to relate it lacked the financial backing of the students. Again the Council says: "It can be done next year."

In addition to the annual awarding of Honor Keys, the Council awarded the members of the Basketball team sweaters.

The Student Council will also, in the future, award the Editor of the Pharmacon an Editor's Key.

PHARMACON EDITOR'S AWARD



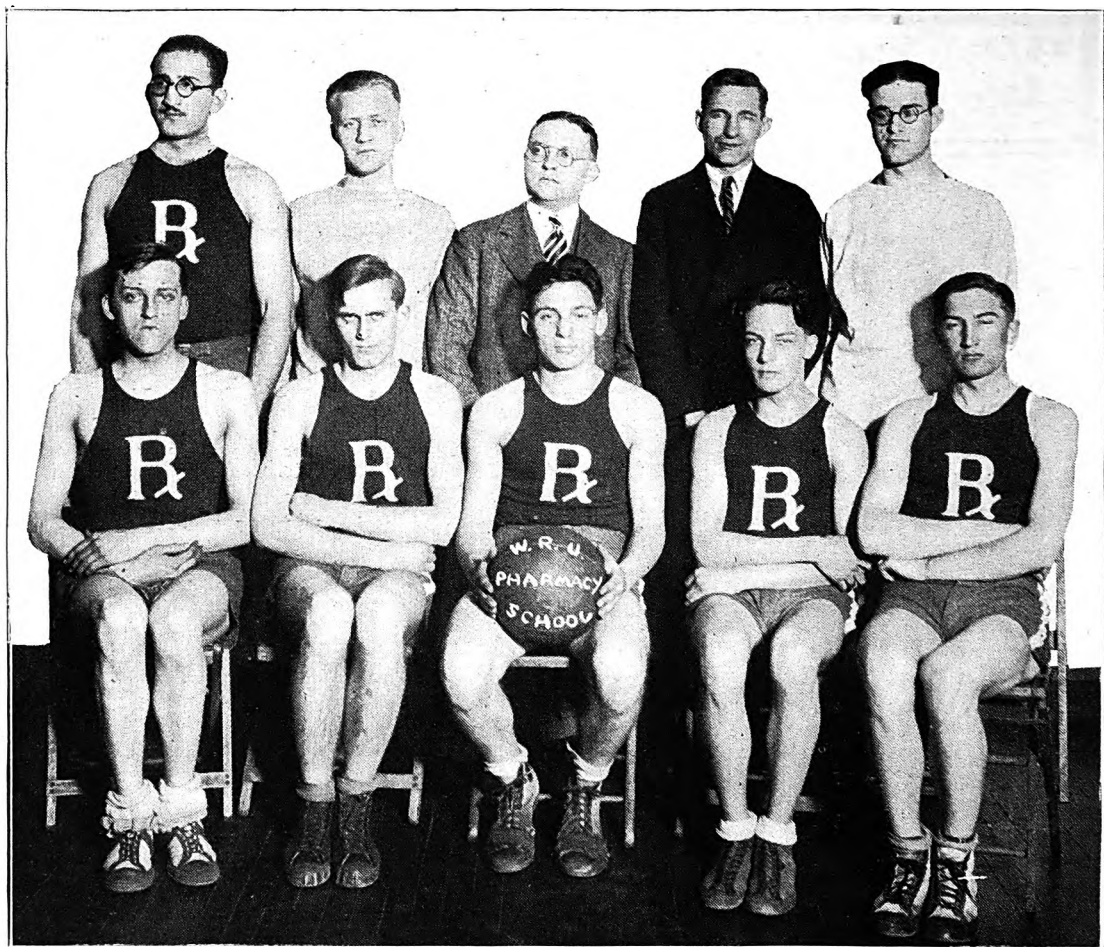
The student body is greatly indebted to Lawrence J. Snyder for his work as Editor of The Pharmacon.

Mr. Snyder is a man of no mean literary talent and possesses a knack of presenting his material in a very intelligible, literary style.

We have received much commendation on our paper from various other schools of pharmacy. To read these commendations should swell with pride the heart of every member of the student body.

As Mr. Snyder has given his untiring efforts so willingly to make our publication one of repute the Student Council on behalf of the student body awarded him with the above gold key.

This key will be awarded annually to the Editor of The Pharmacon.



BASKETBALL

The Pharmacy basketball team has, for another season, won high recognition in the University Intramurals. The "Pharmics" have always held a top-notch position when it comes to basketball. This year's squad has surely done its best to keep Pharmacy's good record unblemished.

The squad consisted of Captain Karner and his loyal supporters: Stockhaus, Nagy, Valway, Scott, Kuchta, Celke, Schroeder and Fitch.

These men fought hard and in a true sport loving fashion. They played nine games during the season, losing but one. They won all eight games in the Miami League (independent) but were defeated in their last game by the Phi Gamma Delta squad. The game with Phi Gamma Delta decided the University Championship and even though the "Green Tornadoes" lost they put up a real fight.

The Intramural Department of Western Reserve University recognizing the caliber of our boys presented each of them with a bronze and a silver medal. As a means of recognition from the student body the Student Council awarded each player a distinctive sweater.

Much credit is due coach Hosler for his loyal support and inspiration. "Bill" is our faculty, athletic enthusiast, and deserves the backing of every student. We need more like "Bill".



William Hosler '22
Secretary



George Miller '22
President

ALUMNI ASSOCIATION

During the last couple of years much has been accomplished by our Alumni Association. Last year's banquet was a huge success. One hundred and thirty-three persons met at the banquet table to renew old acquaintances and make new ones. The Alumni Banquet is an annual affair and has always been held at the Hotel Statler.

The banquet this year will be held at the Statler on Wednesday Evening, June the thirteenth.

The Officers of the Association are planning to have plates set for at least two hundred and fifty people. At the coming banquet a plan will be submitted for an annual stag smoker to be held at one of the fraternity houses.

The present interest among our Alumni is due chiefly to Bill Hosler and George Miller.

Bill Hosler is an energetic organizer as well as an efficient Instructor. Regardless of whether you want information on a U.S.P. preparation or the whereabouts of an old "Grad", Bill can give you the "dope".

Needless to say, all of the Alumni Executive Staff are live boosters for their Alma Mater. Let's back them, graduates of '28.



Paul Hudson '23
Vice-President



Valentine Twarasowski '17
Treasurer



Half hour assembly once a week!



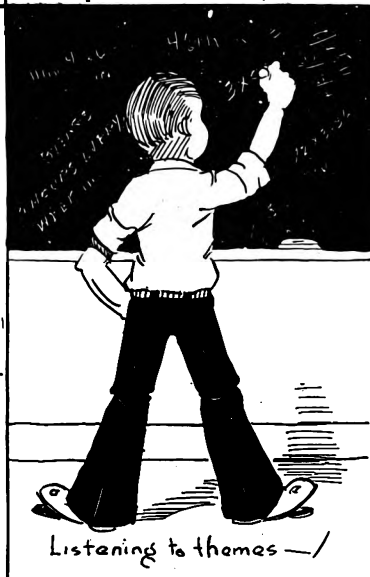
Off periods -!



Trying to figure out some exams!



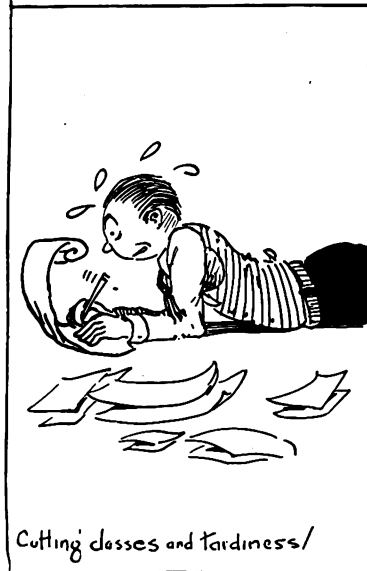
2nd Semester at Lakeside!



Listening to themes -!



Time off between classes!



Cutting classes and tardiness!



2nd Semester ~ Manufacturing!



"WHEN IN HELL DID I LEARN ANYTHING?"

PLANT LIFE

I had a dream the other day. It was one of those mornings after the night before. I sauntered up the walk toward Adelbert Hall in a more or less comatose state of mind. As I entered the portals of that old "Ink Bottle" I had a queer sensation come over me. Three quaint individuals surrounded me. After a period one of them spoke, in deep, guttural tones. He said "I am Dioscordes, King of the realm into which you are about to enter." He paused for a moment and then said: "I have here in my company, two people who will direct you while in my dominion. This gentleman on my right is my eldest son, King U.S.P. X. The lady on my right is Queen N. F. V. They are constantly at war, the one with the other, each trying to usurp the throne that I now occupy. However, as a grateful father I have divided the Empire "Materia Medica" into two provinces and given them each a goodly portion o'er which to reign. Follow me!"

My senses of direction were now quite indistinct. It seemed as if I had entered into a great beyond. I followed him into a long corridor, down this corridor and into a vast open space. He bid me sit down on a tuft of grass. He summoned one of his assistants and commanded her: "Atropa Belladonna, help the man to open his eyes that we may display our realm to him. Let him suffer no pain."

As my eyes began to open, senses still quite benumbed, I saw through a hazy mist various sectors, provinces may we call them, some large and some small. Above the gateway to each province or perhaps we had best call them colonies, were signs which read, "Umbelliferae", "Compositae", "Phytolaccaceae", and many other weird names quite unknown to me.

These three sovereigns surmounted a throne in the center of this vast space. Dioscordes announced that the King and Queen would now display the Empire to me. This introduction took place in the form of an entertainment.

The programme began with an act by Bunts N. Burner, an imported artist from Laboratoria. Bunts N. Burner rendered "Lard" from Sus Scrofa with considerable warmth and feeling.

Nux Vomica, of local fame, gave a humorous sketch which threw the whole audience into convulsions. Curare and Chloroform had to go around and calm them, but many continued to grin broadly with the peculiar "risus sardonicus" which the noted drug caused.

Cascara Sagrada, Aloe, Gamboge and Senna moved the audience mightily with the famous quartette from "The Apothecary", and Morphine concluded the musical program with a plaintive, soothing solo on the hypodermic.

Physostigma Venenosum gave an acrobatic exhibition which had everyone breathless, and caused many hearts to skip a beat throughout the ordeal.

In concluding a poorly co-ordinated speech which lasted five minutes, but seemed to last an age, Cannabis sativus said: "Some of you," addressing the whole realm, "are about to be ground, powdered, made into tinctures and fluid-extracts, injected into dogs, men, gold-fish, frogs and other equally ridiculous creatures; you will be passed around in class rooms, gnawed and stared at by aspiring Pharmacognocists; you will be dissected and squinted at through microscopes by so-called students who think Cambium is a City in Greece. But have courage—there are some that understand and appreciate your work."

PLANT LIFE—Cont'd

"We will do or dye," murmured Turmeric, Haematoxylon and Coccus firmly. At this juncture, a person seated alone in the Flacourtiaceae section, arose and walked slowly toward the exit, followed by gazes of awe and admiration.

"That," said Dioscorides, "is Taraktogenos Kurzii, a new-comer. You know him of course." I made a gesture to indicate that I did not understand. "He's a big specialist in leprosy," King U.S.P. X. informed me.

Just then Coffea Tosta engaged in a stimulating argument with Thea Sinensis as to which of them was the more popular as a beverage—I expressed my contempt and a preference for Postum. (Not an Advertisement!)

Suddenly an uproar arose about the thrones. The Queen had suggested that one of her subjects, Allium Sativum, be included in the State Board exam, whereupon U.S.P. X. laughed and said, "'Od's Badikins, but Allium hath a most offensive air about him. He is unfit for fine company."

"Well, My Lord," the Queen retorted, "methinks Messieurs Coty and Houbigant prosper well without the services of your own Ferula Asafoetida and Valeriana Officinalis."

"Verily, thou hast spoken a truth," said Acidum Benzoicum, nudging in the mid-rib Digitalis who was so convulsed with mirth that his veins bulged and his face became purple.

"Who spoke?" thundered the King furiously.

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PLANT LIFE—Cont'd

"Benzoic Acid," shouted Litmus, indicating the culprit.

"Ah, this, then is the end-point," sighed the accused sadly.

"Litmus is right," added Colchicum Autumnale, "I also heard him."

Benzoic Acid sprang up crying, "Cross Upstart, thou liest, even as does a carpet!"

"Now, preserve yourself, if you can, as you have preserved others," gloated Serranoa Serrulata, showing his teeth in an evil grin.

"But what he says is true," offered Helonias, "Valerian and Asafoetida pollutes the very atmosphere." Asafoetida was now in tears.

"False Unicorn!" shouted Dioscordes, "I shall have you deleted."

"You forget, Your Majesty, that you are not your own master in such matters," reminded Conium Maculatum.

"Be silent, Conium," ordered Quercus Infectoria, "else I shall be compelled to give you a tannin and thus precipitate your active principle."

"You've got your gall," shouted Capsicum hotly, "Conium has ruined better men than you—Socrates for example."

The battle was raging all over the dominion by this time.

Cinchona tried to cool the fevered mob, but soon gave it up, and left with Quassia Amara; they both were very bitter about the whole affair. The Piperaceae Family volunteered some very spicy remarks that often stung, while Cactus Grandiflorus and Stramonium stated very pointedly that the three Aloe brothers showed bad taste in every respect and that Polygala Senega was positively nauseating.



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PLANT LIFE—Cont'd

Chondrus Crispus, known as "Irish" Moss, politely informed Astragalus Gummifer that he was "all wet" whereupon the latter swelled up and left in high disgust.

Acacia, however, was going to stick it out and belligerently offered to emulsify any fixed Oil present, but his challenge was blandly refused by Oleum Olivae. Gossypium purificatum stood by, absorbing everything with huge amusement.

Polyporus Officinalis looked glum; in one encounter, he had been completely stripped of his outer rind, and now sat pale and shivering on a toadstool. In the same struggle, Hydrastis had fallen into the clutches of Ether and was completely exhausted.

Zea Mays had resented being called fresh, but he soon had all the starch taken out of him. Ulmus Fulva was too slippery for Claviceps Purpurea who stopped chasing him down the aisles, and said with a wry face, "You all make me sick, especially Sanguinaria, Rhus Glabra and Krameria—they're Reds and should be ejected."

"Parasite," sneered Cocaine, who had a way of getting under the skin.

"I wouldn't say that if I were you," said Ipecacuanha, "even the common people call you 'dope'."

"That was uncalled for," said Salvia, sagely, "you are always bringing things up like that and creating embarrassing scenes."

"For an unofficial drug you take on some airs, don't you?" remarked Citrus Medica acidly.

PLANT LIFE—Cont'd

Myrica and Quillaja were snubbed completely, as things to be sneezed at. Croton Tiglii made some blistering remarks which were seconded by Sinapis Alba and Nigra who could be very irritating themselves.

"You can't get fly with me," concluded Croton warningly.

Aconitum Napellus was left strictly alone, as his powerful son, Aconitine, accompanied him.

Suddenly the localized, near-riots ceased and the N. F. drugs drew aside, whispering and muttering darkly. Dulcamara mounted a chair and addressed his fellows in a fiery speech, first bitterly denouncing the U.S.P. drugs then sweetly cajoling and entreating the subjects of N. F. IV to rebellion. The whispering became an angry muttering and then a noisy series of cat-calls, shouts and confused denunciations.

"You have been trod underfoot for these many years, sneered at, slighted and spurned by them who should be your comrades," shouted Dulcamara frenziedly, "and why? You are N. F. drugs; has not an N. F. drug roots; does it not have xylem, Phloem, cambium, cortex, stele, leaves, and flowers? Used in the same pills, included in the same tinctures, mixed in the same powders as many U.S.P. drugs.. If one percolates us, are we not exhausted; if one ignites us, are we not reduced to ash and if one wrings us shall we not revenge? Subjects of N.F. IV, I have spoken; arise and smite these tyrants—smite them hips and thigh, root and rhizome; remember the Maine, the Alamo and points west!"

"Let's get out of this," shouted Dioscordes above the uproar, "they're going to raise cain, and not the kind from Saccharrum Officinarum either."

—M. E. Geiger.

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Morris Karlinsky

Vincent P. Maddalena

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The Reserve Pharmakon

Vol. 2

October, 1928

No. 4



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A Publication Dedicated to Professional Pharmacy

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VOL. 2

**WESTERN RESERVE SCHOOL OF PHARMACY
CLEVELAND, OHIO.**

OCTOBER 1928

No. 4

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*Pharmacy is an honorable
profession with an honorable
background.*

THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Our New School

By Dean Spease

Our School has been opening a little each day since September 17th. It is just like a litter of kittens, an eye or two each day and even the mother does not know when all of them will see.

To begin with, we were informed in June, not that we must move but that we must be moved. This is to make way for one of the new hospital buildings. It was found that some of our equipment could not be moved and it was also found possible to give us more space for our work.

The Pharmacognosy department and the class rooms will remain as heretofore in Adelbert Hall. The Botany will be taught in the Biology Building where Dr. Bacon will likewise have his office.

A large basement, nine feet deep, with light areaway and full length windows and its walls faced with brick and painted white, has been placed under the entire pharmacy building. In the front room, with an outside opening, will be placed the Student Health Pharmacy. The equipment is new and will consist of a counter of cupboards and drawers finished in white enamel. Behind this is an eight foot double prescription case and sinks and shelving, all finished in white enamel.

Another room south of this is being fitted up as a rest room for men and one east of it as private laboratories for the professors of Pharmacy. The new basement under the brick building will house the prescription laboratory. Sinks will be placed across the south wall and one on the north wall. The furniture will consist of new individual prescription desks, twenty of them, capable of accommodating forty students, an eight foot double prescription case, and a sixteen foot table, all finished in white enamel.

The floor above (the old pharmacy laboratory) has been divided by means of an eight foot partition into three rooms. One of them will house the control laboratory and the research laboratory of the professor, another contain two rows of new desks to be

used for analytical pharmacy with new balance cases on the walls for twelve analytical balances, and the third will be devoted to hospital manufacturing and will house the shafting and mills. Another building has been moved up to the rear and connected by means of a closed corridor. In it will be the remainder of the manufacturing laboratory.

The laboratory upstairs, formerly used for Chemistry, has been refinished, the desks painted inside and outside, and is to be used for Pharmacy.

We feel now that although our outside appearance is not such as to make anyone envious of us that the inside is much better than we have ever had before and is a place through which we shall be glad and proud to show you. Come and see us.

W. R. U. SCHOOL OF PHARMACY, AN INSTITUTION AND A SYMBOL

In the September issue of the Northern Ohio Druggist which was dedicated to the School of Pharmacy of Western Reserve University, Mr. Carl Winter, Editor of the publication, in a stirring editorial, presented a wonderful tribute to this school. For the benefit of those who are not members of the organization, and who had no chance to read this article we are printing it verbatim, with thanks to Editor Winter for his interest and enthusiasm in our institution.

"This issue of this publication, dedicated to the Western Reserve University School of Pharmacy, is really intended as an appreciation of all good pharmacy schools and as a tribute to progressive pharmaceutical education in general. The exigencies of time and of the material and space available make it necessary that only one school, a worthy representative, be featured. Obviously, Reserve had to be that school. Apart, however, from all considerations such as civic pride, loyalty to friends and the bias of personal affection, the choice is justifiable. For our School of Pharmacy is a representative school; representative in its

virtues as it is in its defects. In fact, it is more than that; it is an outstanding school. Dean Spease is president of the American Conference of Pharmaceutic Faculties, hence a pharmaceutic educator of note. His school is committed to the program of that Conference, to compel prospective pharmacists before entering upon the practice of their vocation to acquire an education equivalent to the A. B. degree of the best of our universities. That is an ambitious program. How wise it is, time alone will tell.

"Western Reserve University has one of the outstanding medical schools in the western hemisphere. Thanks to the ingenuity and persistence of Dean Spease and the ability and faithfulness of his assistants an effective liaison through the hospital dispensaries of the city has been established between the School of Pharmacy and the School of Medicine. The layman may think this a perfectly obvious situation, easily brought about; only those familiar with all the factors in the situation know how difficult and how rare it is. The W. R. U. School of Pharmacy is not a one man institution. It has a homogeneous faculty of able teachers, each a scholar and specialist in his branch. Also they are young men and hence familiar and sympathetic with the problems and difficulties of the young.

"The defects of the school are those inherent in the conditions under which it has to function; conditions, by the way, rather prevalent in most pharmacy schools and aggravated in those affiliated with privately endowed universities. In such universities the favored colleges or departments are those with endowments of their own; the others if allowed to exist are merely tolerated and are hampered in many ways. Since the universities themselves are dependent upon more and greater endowments this situation is well-nigh inevitable. Pharmacy has far too few moneyed friends. Consequently, almost everywhere except in some of the state universities and with the further exception of a very few sufficiently endowed historic schools, pharmaceutical education is in a precarious state.

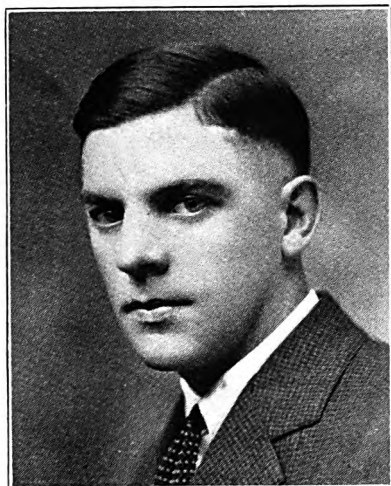
"The trustees of Western Reserve University have been generous with the school of Pharmacy. For several years now they have underwritten a substantial deficit because of the excess of operating costs over

income. Since deficits can not be allowed to mount, the pharmacy school has had to curtail its enrollment to within its facilities. It has done so by setting exacting standards for admission and rigidly enforcing scholarship requirements. This has resulted in reducing the ratio of graduates to matriculants and has caused complaint and some resentment on the part of employed students and the druggists who employed them.

"The School has also been accused of training laboratory men and pharmaceutical technicians instead of practical druggists. Dean Spease admits the accusation. He maintains it is the business of his school to do that. A school graduate can get such merchandising technique as he may need in the drug store, but, for the most part, the converse is not true. The man, continued the dean, with a B. Sc. degree starting out to earn a living has an immediate economic advantage over a college graduate with a B. A. degree. If he has to accommodate himself to the requirements of the commercial type of retail drug store, it will be a little rough on the man, but better for the store the longer he stays there. Big business is finding science and scientific methods increasingly practical. Pharmacy, therefore, can not grow bigger by repudiating them.

"That is Dean Spease's platform; and the deans of other leading colleges of Pharmacy subscribe to it also. There can be no doubt that having announced his program Dean Spease will continue to adhere to it without equivocation. What the effect on American Pharmacy will be if all the Conference schools actually adopt it, it will take at least another generation to ascertain. But it is an interesting experiment, and a necessary one, and W. R. U. School of Pharmacy deserves well of the community for having undertaken it."

Pharmacist is a master of science where 1/20th of a grain counts for life or death.



LEROY D. EDWARDS

We wish to introduce our latest addition to the Faculty, namely, Leroy D. Edwards, Ph.G., B.S., our pharmacognosy instructor.

Mr. Edwards graduated from the Lancaster High School of Lancaster, Wisconsin, and entered the University of Wisconsin, graduating in 1921 with a degree of Graduate in Pharmacy; in 1923, with a degree of Bachelor of Science. While attending the University he was Assistant at the Wisconsin Pharmaceutical Experimental Station.

After graduation he was with Squibb and Co. of New York as Chemist and Pharmacognosist. In the same year he accepted a position as Head of the Pharmacognosy Department at the Indianapolis College of Pharmacy. This position he held until 1928 and in the fall of that year he came to the School of Pharmacy of Western Reserve University, as Demonstrator in Pharmacognosy.

Mr. Edwards is a member of the Theta Chi, Phi Beta Kappa and Phi Kappa Phi Fraternities.

Pharmacy serves an important and valuable mission and service to the public.

ADELAIDE E. HARRIS

Instructor of English, W. R. U. School of Pharmacy

Mrs. Adelaide E. Harris is the English professor in our School of Pharmacy of Western Reserve University. Mrs. Harris has had years of training in the language, and is now studying middle English romances. She has long been a keen student of the literature of the various periods.

This editorial appeared in a recent edition of the Cleveland Plain Dealer. It illustrates Mrs. Harris' profound interest in English in all its phases and changes. Surely, if a scholar of English, as proficient as is our English professor, finds it yet worth while to study further, an embryo pharmacist, shaping himself for an old and honored profession, should seriously consider his English training, and endeavor to absorb as much as his system will allow.

"A member of the faculty of the Western Reserve School of Pharmacy, delving into middle English romances, finds that the heroines of those knighthood days had various interesting cultural diversions, but 'their chief occupation consisted in finding a husband.' Wherein, one might observe, the middle English heroines differed astonishingly little from their sisters of the twentieth century.

"The young ladies of another age, Mrs. Adelaide Evans Harris says, were educated to embroider and to play the harp; their diversions might be playing chess or dancing. Today's young women are educated to read French and, if need be, to earn their living; their diversions may include driving father's car and dancing. Instead of playing the harp, they map tap a typewriter.

"But for most of them now, as then, hunting the husband is the 'chief occupation'. And we can imagine no more useful or enticing an activity. Were it ever abandoned we should shiver in fear for the welfare of the race.

"Some considerations seem fundamental to the progress of society; and one of them is that the woman of marriageable age is by nature a husband hunter. Her methods of course change with the centuries but the object of the chase and the all but universal participation in it changeth not. The golden-haired, blue-eyed, lily and rose com-

plexioned heroine of Mrs. Harris' studies gives way to the less shrinking but no less earnest type that one meets on Euclid Avenue at the lunch hour. Their environment like their habiliment changes but their point of view as to the main issue remains.

"Frankly, we like the heroines of the middle English period. They are second only to the heroines of today in our affections."

R. Schriener.

*Select your pharmacy with
the same care as you do your
physician.*

THE MIXER

The Pharmacy School Mixer held on Tuesday evening, September eighteenth, marked the first social event of Reserve Pharmacy School for the year. The purpose of this annual mixer is to acquaint the new students with each other, with the upper classmen and the faculty.

About sixty per cent of the student body was in attendance and most of the faculty members and their wives were in line when the affair started.

All enjoyed a program of mixed dances to the strains of Peter Nesi's Harmonizers. And last, but not least, came the refreshments which added much to the evening's enjoyment.

A TRIP TO OUR ATTIC

You do not remember, by virtue of insufficient years, the "little red school house on the hill," but the vivid picturing of the authors and poets you have read, gives you more than a hazy idea of its type. The big open stove, the quartered wood piled in the corner, the assorted ages and sizes of the pupils poring over their books to ward off the penetrating glances of the teacher, who with birch rod in hand is seemingly awaiting an opportunity to punish any offender.

There is the effect—and one may inquire—what is the cause? If by any chance, you should enjoy exploring, enter our executive

building, which with all due apologies to the former use of the term, is ranked as our permanent temporary headquarters. Immediately we see the influence of modern intellect, which converts a scarlet red (a color which may suggest devilish difficulties) to an angelic white, which soothes and calms the nerves of visitors and students, often with disastrous effects on the latter, as professors will willingly testify. In the rear of the building will be found a stairway, which if followed through devious turnings and twistings, takes one up to a stuffy, poorly lighted suite of attic rooms. Here is a veritable treasure of odds and ends, well coated with dust; pictures of fruit, flanked with huge flagons whose contents surely were not lemon pop; choice drawings of students long since forgotten; crude drugs scattered around to dry (probably permanently) and lastly, a piece-de-resistance, in the form of old class pictures.

Middle-aged gentlemen of pharmaceutical mien appear, adorned with huge side-burns and long mustachios, their garments of Prince Albert cut. These jaunty gentlemen, with their wing collars, seem to be the pride of the Class of '97. The women of the period are very striking, due to their style of dress, which was emphasized by the excess length and quantity of the various garments.

Advancing the pictures to a more recent date, we pass the athletic student who poses, coyly, twirling on the end of the handle bars which have cropped out from his upper lip. We find the distinguished Professor Arny—a man of national importance in pharmacy, as you all know—accompanied by Mr. Flandermeyer, then a student, but now whose very name sends shivers of apprehension through prospective candidates for the state board. Last but not least, we find our Dean, who as he no doubt will himself state, is just at his prime, looking a trifle younger. Rubicund cheeks enhance his benevolence as he beams on the world at large.

Oh well, "what's it all about?" you may ask, and I'll respond that I don't know. I just thought I'd pass the idea along and get you to look at these pictures.

Abe Harris.

N. O. D. A. NEWS

The N. O. D. A. made an impressive showing at the Ohio State Pharmaceutical Association convention at Cedar Point last July. More druggists belonging to the N. O. D. A. attended than from any other single community or organization in the state.

John Jarmuzewski, the former president of the N. O. D. A., was elected and installed as First Vice-President.

Henry Pollack was elected an honorary member of the O. S. P. A. at this convention.

The N. O. D. A. Picnic held last August at Geauga Lake was a great success. The association made a profit of about \$3000, all of which was put into the N. O. D. A. Building Fund.

Charles Masek won the Atwater Kent Radio and the Standard Drug Company won the washing machine.

Messrs. Cermak, Steiner and Rosenberg and families attended the N. A. R. D. Convention in California.

At present, the N. O. D. A. is attempting to standardize the drug store. In the surrounding territory, investigations are being carried on to discover whether or not each store is properly equipped for prescription work. Many of our stores are equipped with little more than a mortar, pestle and graduate and in several cases, a registered pharmacist is present only about one-tenth of the time.

The association is also attempting to put a bill through the legislature which will restrict drug store ownership to registered pharmacists—a bill similar to the one now in force in Pennsylvania.

*To endow a pharmacy institute
is a far-sighted public service.*

:: Athletics ::

This column is to be devoted to a discussion of athletics exclusively and will be known officially as the athletic department. It will contain a review and criticism of the games played by the Pharmacy teams, and other events included under its head. Any suggestion for its improvement will be appreciated by the editor. Address all communication to the athletic editor of the Pharmacon.

The confusion attending the beginning of a new school year has now subsided and our thoughts are turning to school activities. College life would be dull and monotonous without them and it is the duty of each student to do his or her part to make them a success. In this article we hope to bring to light the need of school spirit by anticipating what can be done with the support of the student body from what has been done without its support.

In the past years, athletics in the School of Pharmacy have been left to a very small minority of the student body. That situation should not prevail. True it is, that our work in this field is limited. That alone should be an incentive for us to make the teams we do have the best in the university. We have the team; the only thing lacking is the support of the student body. Combined, they can do wonders; divided, they are helpless. We are proud of our school and of our teams. Let us show our spirit and loyalty by turning out in a body at the games and cheer them on to new heights.

To give those who are not familiar, something of an idea of what has been accomplished in previous years, we will go over the high spots of past seasons. Last year our basketball team won every game preceding the finals only to be nosed out by the Phi Gams for the university championship. The same was true of the previous season. The baseball team has met similar success, defeating the strong Parke-Davis aggregation two years ago.

The basketball team this year will probably be built around Gayok, Celke, Valway, Schroeder, Karner, Yurglic and Fitch. All

newcomers with some experience are requested to come out for the team so that we may place our full strength on the floor.

Since the baseball season is too far in the future to be discussed at length in this writing, keep it in mind so that we will be well organized and set to go when the time comes.

Let's get together, "Pharmics." Put it across with a bang and when the smoke of the battle has cleared, Pharmacy will be on top. Let's go.

A. Kuchta.

The practice of the art and science of pharmacy is an essential public service.

Editorials

Among the varied topics upon which the Dean elaborated at the first assembly of the school of Pharmacy, held on Tuesday, September 18, in Adelbert Hall, the Pharmacon was mentioned. The Dean brought out three important functions of this publication, three functions which should claim the active interest of every student in the Pharmacy School:

1. To boost Pharmacy as a profession.
2. To boost the School of Pharmacy of Western Reserve.
3. To boost the student body, collectively and individually.

The Pharmacon as a booster for the profession has done much here in our own city as well as in every locality to which it has been sent. The people engaged in its publication are interested solely in Pharmacy or its allied sciences, have the best interests of the profession at heart and are endeavoring to instill into the pages of this publication their enthusiasm for the profession.

As a booster for the School of Pharmacy, it is only necessary to pick up publications from other schools and trade journals and glance at the exchange columns to see how the Pharmacon has impressed.

Our students seldom realize just how much the Pharmacon boosts them, either as a body or individually, but a little consideration of the matter will show that any student body sponsoring such an undertaking as this cannot but command the respect of both outsiders and also those in the profession. To those who are on the staff, the Pharmacon serves as an advertising medium, since it places before several hundred people the result of extra effort spent in extra-curricular activities by these students; and when these same students step into their chosen fields, without a doubt the advertising they receive will serve them in good stead.

We ask then of you, the student, earnest cooperation in this undertaking; the staff always has room for one more; if you feel that your studies and outside activities prohibit a regular position, we would appreciate any article which you care to present. Feel

free to express your feelings toward certain matters in our Open Forum Column, and above all remember that The Pharmacan is your paper, it's for your school, and for your Profession.

*Pharmacists are trained to
protect public health.*

Young men and women looking toward a degree from liberal arts and professional

**College Entrance
Not What
It Used to Be**

schools find that it is not so easy to enter as it was a few years back.

Only a decade or two ago preparatory and high school graduates were admitted to the higher institutions of learning with very little formality, in comparison with that required today. Students were not only welcomed with open arms but were solicited with businesslike ardor.

Nowadays the freshman student will bear witness to the fact that all this has changed. More than likely the college of his choice looked upon his desire to enter its portals with more or less apathy. An extensive questionnaire is forwarded to him whereby much pertinent—and to his way of thinking, undoubtedly, some impertinent—information gleaned as regards the probable habits, customs and manners of his ancestors as well as his own personal inclinations, ambitions and qualifications. A photograph and perhaps letters of recommendation have to be submitted. Innumerable letters have to be written or else an official of the institution must be satisfied by personal interview that the applicant has those marginal qualifications—or is not encumbered with marginal disqualifications—that insures the type of student desired.

Frequently, as may be expected, freshmen are rather too optimistic as regards their own qualifications. On the other hand it frequently happens that they are too modest, so it is only fair to all concerned that some qualified and impartial agency should be employed, if possible, to submit an expert

opinion in such circumstances. It is here that high-school principals render valuable aid by submitting real and conscientious estimates of prospective college freshmen along with the report of the standing in classes which the principal is always called upon to furnish in behalf of the student.

On the basis of all this information it often happens that the applicant's qualifications do not quite warrant his immediate admittance to college. But, on the other hand, the applicant appears to be worthy of consideration for future entrance. Consequently, he is advised to spend another year or more in further preparation. In many instances this advice is faithfully followed and the candidate reports back a year or two later and usually with favorable results. Much expense and effort on the part of the college and much disappointment and embarrassment on the part of the student is avoided by this procedure.

**Over-Crowding
in Colleges
and Professional
Schools**

Secondary school graduates and others who seek higher academic or professional training have multiplied so rapidly, however, that our

colleges have been swamped in their efforts to offer their facilities to all qualified candidates who apply. Grave questions of expediency have arisen. The wisdom of overcrowding the technical callings and professions has been questioned. It seems to become a question of finding out who is the best fitted.

All this, taken in conjunction with the intelligence tests that have been developed, will, it is believed, enable the college to find out what kind of human material it has to work with in its freshman class. The college will at least have some evidence on hand to indicate how vigorously the prospective student will react to the kind of education that he is seeking. The final analysis, however, must depend upon the student's response; his aptitude and ability when confronted with the special problems and intricacies peculiar to the particular line of endeavor that he has chosen for his life work. It is generally agreed, from an educational viewpoint, that most of the time and effort spent on recognized liberal subjects in college is not wasted, even though

the student does not successfully finish the course that he originally planned for himself at the time of college entrance. But, in technical and professional subjects it is quite a different matter. There, the effort put forth on specialized kinds of knowledge is more likely never to be of any avail; the value attached to it can be seldom retrieved and "plucking" cases become more or less tragic in nature. Obviously, then, such methods as will prepare only the proper type of student for a given calling and eliminate the unfit early, will serve a double purpose, namely, reduce overcrowding and bar the unfit with economy to the college and justice to the individual.

Determining the Students' Fitness and Making Adjustments

that in spite of the care and caution used in the admittance of students some are bound to be maladjustments. The type of first year work is of such a nature, both academically and professionally, that the aptness of the student for the work and the fitness of the work for the student will be clearly demonstrated early in the course. Sufficient work of a liberalizing nature, we believe, is introduced early in the course along with the technical, so that in case the student finds himself a misfit he can readily readjust himself to other lines of endeavor with most of the first and a good share of the second year's work as a real asset.

Professional Pharmacy and the Four Year Course

a result, it has been raised to the plane of the other recognized professions. If this position is to be maintained and fortified with the prerogatives and privileges that go with professional standing, it will necessarily have to push forward those educational extensions that put it on the level with other professions. Pharmacy must either be recognized as a specialized kind of business involving a certain amount of technique and a smattering of natural science along with a familiarity with certain commercial methods, mainly those of merchandizing, or it

Here at Reserve we have framed our standard four year pharmacy course with this very thing in mind. We realize

For the last twenty years pharmacy has had a continued and ever expanding educational program. As

must firmly establish itself on a professional basis wherein service for the public welfare is performed with the idea of giving one's best in skill and knowledge attained through broad scientific training. This, with adherence to a code of ethics which in some form is the keynote of any real profession, inspires confidence and compels respect. In connection with this matter let us not forget that the United States government, inferentially at least, says pharmacy is not a profession. Aliens who are members of any profession receive exceptional treatment, but the immigration authorities ruled out pharmacists. When the plea was made that pharmacy should be placed on an equality with other professions as regards eligibility for civil service appointments, the following reply was made: "If ever such a time arrives when a majority of the state boards of pharmacy require as prerequisite for admission to the examination for registered pharmacist graduation, with a bachelor's degree in pharmacy, the commission will then give consideration to a revision of its requirements for the position of pharmacist in the government service."

In conformity with the plan agreed to by the great majority of American pharmacy colleges, Reserve School of Pharmacy plans to offer, exclusively, the four year course leading to the bachelor's degree, in the near future. While the course of study, as a whole, has not been definitely formulated and mapped, the proposed first year's work is being tried out during the current year while a study of the succeeding year's work is going on. It is hoped that we shall be able to fix upon a definite four year course of study before the close of the present school year.

Reserve Pharmacy Laboratories Now Among the Best of Their Kind

much enlarged and improved laboratories and their attendant facilities unexcelled by any other schools in the country; we shall now be in a position to progress in a very substantial way.

With a more carefully selected student body; the adoption of a new four year course of study; very

Pharmacy is an honorable calling.

New Hopes and an Invitation

In connection with these new things which we believe will help toward the betterment of pharmacy in general and stimulate the welfare of our school in particular, we trust that our alumni and our other friends will favor us with a visit whenever opportunity allows.

N. T. C.

❁ Social News ❁

PHI DELTA CHI NEWS

By Robert Kumpf

Alpha Alpha started this school year with nineteen active members. This is the largest number of actives returning to school in the history of the chapter. They are: Lawrence Baldinger of Galion, Paul Steidl of Akron, Lon Lyman of Youngstown, Richard Koch of Columbiana, Carl Shane, Robert Kumpf, Donald Kessler, and Earl Cook, all of Canton, Michael Gayok of McKeesport, Pa., and Alvin Kuttler, Henry Breck, Henry Gallagher, Rudolph Schreiner, George Bruehler, Nelson Schroeder, Adelbert Patronskey, Al Kuchta, Edgar Cantlon and Clarence Speice, all of Cleveland. With all these actives, we are looking forward to a very progressive year.

We are glad to announce that Brother Walter F. Wargell is the proud father of a baby girl. Mr. Wargell graduated last June with a Bachelor of Science degree. He was instructor in the pharmacy laboratory last year. He has recently accepted a position with the Mulford Company, and we wish him much success.

The dining table is thriving this year under the able guidance of Brother Cook, steward, and Brother Shane, his assistant. Serving meals at the house brings at least twenty-four of the fellows together each day at noon, and is a big factor in promoting good fellowship. We are certainly indebted to Brother Cook for the fine home-cooked meals he is giving us.

We are proud to announce that Brothers Schreiner, Baldinger and Kessler passed the State Pharmacy Board last June and have received their full registered papers. These registered men graduated last June with the degree of Pharmaceutical Chemist. Brother Shane also received his Assistant Papers at the meeting of the June Board.

During the summer, the chapter house was refinished both inside and out. We moved into our present location last May and we are much more pleased with it than we were with the old quarters next door.

Several of the brothers of this chapter

*Pharmacy is a necessity for
every community.*

spent the entire summer here. Brother Judson of Alpha Gamma chapter, Brother Sanger of Xi chapter, Mr. Stafford and Mr. Hart of Xi chapter, spent the summer at the local chapter house also.

We have pledged nine new men, making a total of ten pledges. Pledge Sedely, who because of illness was unable to be initiated, is attending Cleveland College this year. The new men are: Robert Pumphrey of Minerva, Kenneth Lautenschlager of Kenmore, Edwin Miller of Canton, Harold McElroy of Carrollton, Raymond Baldwin of Ashtabula, and George Gerlach, Fernau Bader, Nelson Rauschkalb and Richard Kroeger, all of Cleveland.

We are very proud of Brother Lawrence Baldinger, because his months of hard persistent study have reaped for him the scholarship for the third time. Brother Baldinger, as our leader in the fraternity, is doing much to promote the scholastic standing of our chapter.

On Friday evening, October 26, Phi Delta Chi Fraternity held an informal dance at the Woman's Club. Forty couple were present and enjoyed an evening of dancing to the rhythmic strains furnished by Nesi's orchestra. The official chaperons were: Doctor and Mrs. Bacon, Professor and Mrs. Hosler, Professor and Mrs. Davy, ably assisted by Dean and Mrs. Spease, Doctor and Mrs. Edwards, and Doctor and Mrs. Hovorka. The embryo brothers, and a representative group of alumni turned out for the affair.

The dance was arranged for by Robert Kumpf, chairman of the committee. Favors, in the form of leather key cases, with the fraternity coat-of-arms inscribed upon them, were given to the ladies.

*Pharmacy renders you service
eighteen hours a day.*

PHI DELTA CHI

Thirty-eight members attended the annual dinner of the Phi Delta Chi Fraternity during the convention of the A. Ph. A. at Portland on Wednesday evening, August 22.

The toastmaster was Edward Spease, the Grand President of the Fraternity and Dean of the College of Pharmacy, Western Reserve University. Following the dinner, short talks were given by Dean Wulling, University of Minnesota, Dean DuMez of the University of Maryland, Dean Lyman of the University of Nebraska, Dean Havenhill of Kansas University and Dean Jordan of Purdue University.

This is the fourth consecutive year the Fraternity has held a dinner during the course of the A. Ph. A. convention and they have proven so successful that they are now accepted as part of the regular program. Increasing interest has been shown each year with resultant larger attendance annually.

The following members were present: Wm. Acheson (Eta), Cambridge, Mass.; Adolph Ackerman (Eta), Swampscott, Mass.; A. B. Wood (Eta), Portland, Me.; D. O. Wolff (Eta), Melrose, Mass.; Prof. Wm. J. Bonisteel (Alpha), Searsdale, N. Y.; Prof. E. D. Davy (Xi), Cleveland, Ohio; Prof. L. E. Harris (Rho), Norman, Okla.; Prof. L. N. Brown (Gamma), New York City; Dr. W. L. Scoville (Eta), Detroit, Mich.; W. H. Blome (Alpha), Detroit, Mich.; Prof. R. A. Lyman (Pi), Lincoln, Neb.; Prof. Edward Spease (Xi), Cleveland, Ohio; Prof. W. O. Richtmann (Delta), Madison, Wis.; Robt. J. Ruth (Epsilon), New York City; Prof. F. J. Wulling (Theta), Minneapolis, Minn.; Prof. A. B. Nichols (Epsilon), Philadelphia, Pa.; E. B. Curtis (Eta), Portland, Me.; L. C. Heustis, Indianapolis, Ind.; J. C. Krantz, Jr. (Iota), Baltimore, Md.; Prof. A. G. DuMez (Iota), Baltimore, Md.; E. F. Kelly (Iota), Baltimore, Md.; Prof. L. D. Fonda (Tau), Newark, N. J.; E. S. Sater (Theta), Minneapolis, Minn.; Prof. H. B. Fenwick (Eta), Boston, Mass.; L. A. Whiting (Eta), Danvers, Mass.; E. J. Breck (Eta), Springfield, Mass.; J. J. Breen (Eta), Worcester, Mass.; Prof. C. J. Clayton (Sigma), Denver, Colo.; Prof. J. H. Wurdack (Mu), Pittsburgh, Pa.; F. T. Millea, Jr. (Eta), Peabody, Mass.; J. J. McWalter (Eta), Concord, Mass.; C. E. Hokanson (Eta), Brockton, Mass.; Prof.

Geo. L. Burroughs (Eta and Alpha Epsilon), University, Miss.; I. P. Gammon, Jr. (Eta), Brookline, Mass.; Prof. H. C. Newton (Eta and Phi), Omaha, Neb.; B. K. Booth (Eta), Fall River, Mass.; Prof. L. A. Thompson (Eta), Cambridge, Mass.; Prof. C. B. Jordan (Tau), Lafayette, Ind.

KAPPA PSI

By Robert M. Porter

National Convention of Kappa Psi Fraternity

The national convention of Kappa Psi Fraternity opened on the morning of August 17, when the members of Kappa Psi Fraternity grasped the hand of fellowship at the Hotel Eastland in Portland, Maine. Robert M. Porter, Regent of Beta Beta Chapter, Charles A. Young, Past Regent, and Alexander Celke represented the active chapter at W. R. U. Dr. Bacon and Dr. Lankhelma were present as facultate members. This convention presented quite a unique opportunity to the delegates as it was held just previous to the annual meeting of The American Pharmaceutical Association. The meeting of Kappa Psi men from all over the U. S. A. was a wonderful asset to those in attendance. Delegates were present from California, Oregon, Florida, Wisconsin, Tennessee and ever so many more distant states. To realize that the student body of pharmacy presented as fine an assemblage of high caliber manhood as was present at this meeting made one feel proud that he was a student of the pharmaceutical arts and sciences.

The topics of greatest weight that were discussed were: Ritual, "horse play" initiation, annual meetings, pledging, scholarship, purchasing of a chapter house, honorary members, inter-fraternity relations, expulsions, new chapters, branch A. Ph. A. membership, faculty advisors, election of officers, Mask and Agora.

The election of officers took place at the business session on the second day of the convention. The following officers were elected to serve as Grand Council officers.

Dr. W. Bruce Philip was re-elected as grand regent. Brother Philip is of the University of California.

Prof. Florin Amrhein was re-elected as grand vice regent. Brother Amrhein is of Massachusetts College of Pharmacy.

Prof. F. D. Stoll was elected as grand supervisor of ritual. Brother Stoll is of the Louisville College of Pharmacy.

Dr. A. R. Bliss, Jr., was re-elected as grand registrar and editor. Brother Bliss is of the University of Tennessee, and Dr. L. K. Darbaker was re-elected as grand his-

torian. Brother Darbaker is of the University of Pittsburgh.

At the fraternity banquet at the Eastland Saturday night Kappa Psi was ever so glad to extend to H. C. Christensen, of Chicago, and John Culley, of Ogden, Utah, honorary memberships into Kappa Psi. Brother Christensen is secretary of the National Association of Boards of Pharmacy. Brother Culley is a past president of the National Association of Boards of Pharmacy.

These two men are but typical of the big men in pharmacy that the delegates to the convention had the privilege of meeting. The delegates from Beta Beta remained for the A. Ph. A. convention. They feel that they had an extraordinary opportunity in such an exceptional combination wherein students of pharmacy were enabled to gain an insight of professional pharmacy.

ALPHA ZETA OMEGA NEWS

Mr. Rueben Green of '26, having recently gone through the nuptials, can be put in the class with the rest of the Benedicts.

Mr. Max Cohen, one of the favored students to receive a B. S. degree, is studying medicine at Northwestern.

Sam Krenitz of '25 now attends Reserve Medical School. His brother, Phil, is now acting in the capacity of an assistant pharmacist.

Mr. Leonard Silverstein of the old Brownell days, had a hot but unprofitable experience in watching his car go up in flames.

Mr. Norbert Kruger intends to embark on the good ship of matrimony sometime this December.

Mr. Millard Berger of '25, is now the possessor of two stores in Akron.

Mr. Max Klein of '20, has committed himself as behooves a married man.

At a recent smoker given by the A Z O, many new students of our school became acquainted with some of the boys. The boys indulged in tiddley-winks, and ping-pong, barring mumbley-peg, as it was too hard on the floor. The pledges resulting from this smoker are M. Cole, J. Miller, J. Eisenberg, J. Dworkin, S. Lester, S. Cohen, and C. Adelstein.

Another feature to the scholastic cap of W. R. U. Pharmacy School is the high mark of student, Maurice Schoenberg, in the assistant pharmacy examination last June. It is interesting to note that he makes the third W. R. U. student to take "high marks" on State Boards in the past two years; the other two were L. Rutman whose grade was highest on the "full exam", and Abe Harris, a present student, who achieved this distinction on the assistant examination. Although the Cleveland of A Z O cannot boast a scholarship man, they recall with pride that two of the three men who brought state board honor to Reserve, were A Z O fraters. It might also be mentioned that no present member of the Cleveland chapter has ever failed a state board.

At a recent affair of A Z O, the pledges were given a treat, in anticipation of the treat that they will furnish when it's "paddle-time" in February. A dinner dance was given at the Rainbow Room of the Winton, to the accompaniment of George Williams' Serenaders. The guests of honor were Professor and Mrs. Chamberlin. Brother Uh-

lenet of our New Jersey chapter was also among us. Each of the ladies present received a silver vanity case, engraved with the A Z O motto. The programs were blue booklets stamped in gold letters. Amid the bursting of balloons and the blowing of googads and the syncopations of the orchestra, everyone had a good time. The chapter voluntarily turned out in good order, having five times as many alumni as actives present. Because of the good time, everyone is eagerly looking forward to another such affair.

Our meetings to date have been well attended, having 100% of the active members present at all meetings and about 70% of the alumni. Perhaps the reason for such good attendance may be attributed to our weekly programs; at each meeting one member speaks on miscellaneous subjects as: Arthur Brisbane, Shakespearean Literature, Pharmaceutical merchandising, etc., etc.

SORORITY NEWS

Phi Kappa Omicron started the school year with only seven active members: Wanda Baygrowitz, Lucille Bickford, Irene Boris, Ruth Kotershall, Emma Pejsa, Mildred Pirson and Ruth Pirson.

Gertrude Horsch, our secretary last year, received her degree of Pharmaceutical Chemist in June and is now working toward a degree of Bachelor of Science at the University of Michigan.

Antoinette Szczytkowski continued her work this summer at Ohio State University, receiving her degree of Pharmaceutical Chemist in the fall. Together with Antoinette Lutheran, a sorority sister, she took the State Board Examination in October.

Ethel Kolozvary and Mary Kondash have taken a year's leave of absence. Ethel has resumed her work at the Gegenheimer Pharmacy at Mayfield and Lee Roads. Mary is being initiated into the usual Pharmacy routine at the Standard Drug at Coventry and Euclid Heights Boulevard.

PERSONALS

Mary Kondash and Emma Pejsa attended the summer session at the University of Wisconsin.

Irene Boris studied at the University of Pittsburgh this summer but is with us again this fall.

Lucille Bickford spent the greater part of the summer in the northern part of Michigan.

Ruth Pirson attended the Ohio State and Michigan Football game at Columbus. Ruth was unhappy to report that her team lost.

Ruth and Mildred Pirson also attended the Michigan and Illinois game at Ann Arbor.

A "get-together" bridge was held in honor of the freshman girls at the home of Ruth and Mildred Pirson. The evening was spent in bridge, gossip and a delicious luncheon.

Three girls entered the freshman ranks this semester: Bertha Henrietta Grosser of South Euclid who graduated from Brush High School in 1928; Clara G. Goldberg of Cleveland who graduated from Central High School in 1927, and has worked at the Adelstein and Adelstein Drug Company; and Virginia Portner of Lakewood who graduated from St. Joseph's Academy.

Miss Irene M. Boris, Morris Karlinsky, Lon G. Lyman, Vincent P. Maddalena, Max Riemer, and Roy I. Scott, attended the University of Pittsburgh for the summer session of 1928.

Miss Antoinette E. Szczytkowski attended Ohio State University during the past summer.

Morris Karlinsky, Vincent P. Maddalena, Roy I. Scott and Antoinette E. Szczytkowski completed their work this summer for the degree of Pharmaceutical Chemist which has been conferred upon them this fall.

Alumni News

As a direct message to the alumni, we wish to thank those of you from whom we received acknowledgement and appreciation for the Pharmacon. One of the big purposes which we are trying to serve, is to act as a communication between the Alumni themselves and between the alumni and the School of Pharmacy. The only way that this can be accomplished is by cooperation from the alumni organization. We are striving to do this through the Pharmacon; however, if no response is received, our efforts are in vain; therefore, let us combine in our efforts to make this year a successful one, for the advancement of both our school and our paper.

As further evidence of our desire to have complete cooperation between the alumni, the school and the students, we inaugurated the idea of an Annual Alumni Smoker which we hope will act as an incentive to our alumni. This affair is being sponsored each year by the Kappa Psi and Phi Delta Chi Fraternities, who have joined in their efforts to find a solution to our problem. We hope to establish this function as a precedent for others to follow. This year it will be held at the Kappa Psi Fraternity House at 1619 East 117 Street; the following year it will be held at the Phi Delta Chi House at 11515 Mayfield Road.

Our main objective is to induce the alumni to attend this gathering in order to acquaint themselves with the other members of the alumni organization, and to renew old time friendships, and at the same time meet the students along with their instructors. We have in mind a gathering where the elements of weather collaborate with the elements of those present; in other words, a meeting of former friends where—remember the time when—will be the pass words to reopen long forgotten memories and to enjoy again the good times when you were a mere apprentice and just another student.

The date selected was November the twenty-eighth at eight-thirty. Plans are being made to have plenty of entertainment consisting of music, card games, smokes

and refreshments. In conclusion, we would like to have as many as we possibly can persuade to stay for the annual fracas between Case and Reserve. We'll have our own cheering section so we can enjoy the game in our own little way. It's your party, Alumni, so let's get together for the big push. Remember the date—November the twenty-eighth.

Alumni Personals

Of our recent graduates, those who returned are Lawrence H. Baldinger, Isadore Goldfarb, Donald B. O. Kessler, James Speer Neely and Rudolph A. Schreiner. "Higher education" seems to be the policy of these newly graduated men.

Harry Baskind, Albert Fine, William Moody, Merle Myers, Vincent Stark, Charles Young, Alfred Zarlengo, Milford Harris and Peter Palsis are those that have forsaken school life to engage in the bitter strife of this "Crool Woild".

Mr. Walter F. Wargell has accepted a position with Mulford and Co. A new arrival in the Wargell family was Elizabeth Ann Wargell. Hearty congratulations—Walt.

Miss Gertrude Horsch is attending the University of Michigan.

Mr. Walter F. Gerlach, or Wally, is working for Mr. Pollock on Prospect avenue. Wally surprised everyone by announcing that he was married.

Now is the time for our new alumni to get into the habit of paying us a visit every so often. We wouldn't want you to forget us so soon and needless to add, we don't want to forget you either.

Mr. Lawrence Snyder is attending the Medical School at the University of Iowa.

A headline in The Cleveland News for October 16th read "Battling Mayor of Lyndhust Goes on Warpath." Further perusal of the article showed us that it was not our Harry (Mayor H. F. Guenther) but that the article was about another mayor in a different town of similar name. Knowing our Harry always to be of a serene and quiet nature we are glad that the shock experienced in reading the headline did not cause heart-failure before we read the article. Moral: Beware! of headliners.

Mr. Stanley DeVille, '24, is now attending the School of Medicine of W. R. U.

Mr. Edward Stein has opened a new store at South and Grant in Akron. We wish him success in his new enterprise.

Mr. Henry Kumpf, '26, is now located in Akron with the Gorrell Pharmacists. Henry is one of our frequent visitors. Keep it up, Henry.

Mr. George Belohoubek is a student at the School of Medicine at Louisville, Kentucky.

Mr. Victor A. Buzzelli is now manager of a Marshall Drug Store at 119 Street and Buckeye.

Mr. Joseph D. Clinton, '26, is managing a Marshall Store at Mayfield and Euclid.

Mr. Adam Rudibaugh, '26, is operating a store of his own in Lisbon, Ohio. Rudy was married not so long ago and we extend our best wishes to Mr. and Mrs. Rudibaugh.

Mr. Walter P. Hess is manager of a Marshall Drug Store at Harvard and Broadway. Walt is seriously engaged in the business of making his store the best.

Mr. Stanley Dickhout, '24, of Berea, is working in a store there.

Mr. Fred Morrison, '21, is managing a Marshall Store at Coventry and Mayfield. Freddy is well liked by both his employers and employees and such popularity is deserving. You have our best wishes, Fred.

Mr. Barney Dobrin has a store of his own at 73rd Street and Kinsman. Come and see us—sometime, Barney.

Mr. Ben Robinson, '26, is manager of a Day Drug Store of Akron, located at East North and Market and operates one of the best stores in that company.

Mr. Frank Stoerkel, '26, is now happily married and can be found at Mr. Kniseley's Pharmacy at Ravenna, Ohio.

We are in receipt of a letter from Albert E. Knauf who is now located at the University of Illinois at Urbana, Ill. Mr. Knauf was graduated from the School of Pharmacy in 1926 as a Graduate of Pharmacy. Last June, 1928, he received his Bachelor of Science degree and at the end of the summer school session was awarded the degree of Master of Science. Mr. Knauf was a holder of one of the scholarships offered by the School of Pharmacy to the Freshman student ranking highest in the class. He is at the present time engaged in work leading to the degree of Doctor of Philosophy. According to his letter the Chemistry department at the University of Illinois now

boasts of 93 instructors and about 2,700 students, 120 of whom are doing graduate work. Good luck to you, Al, the School of Pharmacy is proud to have you as a worthy representative in the University of Illinois.

Mr. and Mrs. William Milton Harper announce the marriage of their daughter, Marion Louise, to Mr. Clarence Howard Priebe on Monday, August the twenty-seventh, nineteen hundred and twenty-eight. Mr. Priebe is a graduate of the School of Pharmacy, Class of 1925. He is a member of Alpha Alpha Chapter of Phi Delta Chi Fraternity. At the present time he is working for the Marshall Drug Co.

THE ALUMNI BANQUET

By William W. Hosler, President of the Alumni Association

As I begin this assignment it is a great temptation to talk of the plans for the next banquet (for there are already several ideas being worked out), rather than write about the past party. This seems like a matter of routine, telling about who was there, what we did, who was elected, etc. Perhaps some of you missed the party last June just for that same reason, that it seemed just like routine to go down to the Statler, eat an excellent chicken dinner, dance to some good music, and go home again.

A surprise is in store for next year. A change in scenery, a new menu, better music, and a return of several of the "old boys" is going to produce a party such as we have never held before.

To get back on the subject, let me say that President George Miller made an excellent toastmaster, and that Dean Spease made the shortest speech on record. Prof. Chamberlin and several of his very capable Pharmacon staff were introduced, and "went over big", if I may use such an expression. The Cuesta Rey cigars were supplied through the kindness of Wallace and Schwartz, and the Mary Garden Chocolates were by Crane. I wish to take this opportunity to thank these friends of ours.

Dean and Mrs. Spease, Dr. Lankelma, Prof. and Mrs. Davy, and Prof. and Mrs. Chamberlin represented the Faculty. We missed Mrs. Lankelma, but realized she had a very good excuse (Herman Peter Lankelma, Jr.), and will look for her again next year.

The officers for 1927-28, Pres. George Miller, Vice Pres. Paul Hudson, Treas. Miss V. C. Twarogowski, and Sec'y W. W. Hosler, were all present, and were succeeded by W. W. Hosler, Pres., Paul Hudson, V. P., Walter Wargell, Treas., and Louis Gressel, Sec'y. The vacancies in the executive committee were filled by the retiring President and Otto Svec.

The Seniors present, (and they have joined the Association almost 100%) were, Gertrude Horsch, M. Harris, Roy Scott, James Neely, Don Kessler, William Moody, Lawrence Baldinger, Chas. Young, Walter Wargell, Vincent Stark, Isadore Goldfarb, Harry Baskind, Felix Swiatkowski, Peter

Palsis, and Rudolph Schreiner. We hope they will be back for the smoker at the Kappa Psi House the night before Thanksgiving, and for the party, next year.

Among the guests were several of our old friends and supporters, and some new ones whom we were glad to welcome. Carl Winter, Harry Pierce, A. Riegelhaupt, and Herbert Decker.

The Alumni (and there should have been more of them) were: Otto Svec, George Sherlock, Fred Cermak, Henry Pollack, Eugene Selzer, Lou Miller, Aaron Davidson, Ed Pasco, Wade Wetzels, Ludwig Letak, Frank Lattin, Morris Spiegel, Nelson Schribner, Jack Franklin, Justin Zverina, Fred Greiner, Emil Petersilge, and M. Berger. The Akron boys were conspicuous by their absence. Pep up, down there in Ruber town, and get back into things.

Henry Gallagher, Robert Porter, Ernest Gross, and Ruth Pirson represented the student body. It is still a question whether they were just practicing, or coming just to be sure to attend once, at least. We were glad to have them, and hope the next one they attend will be "on us".

And now for the bouquets, to those loyal members who, unable to attend, send in their checks just the same, so that the Association will carry on. Our Honor Roll: A. Ralph Popp, Walter Palenschat, H. H. Persky, C. F. Buescher, and H. W. Rothman. Mr. Rothman is not an alumnus but certainly is a staunch friend. Joe Matusek was represented by George Sherlock. Next year we want them both.

The smoker has been mentioned, there is a separate notice about it, we are expecting a good crowd, so come on along, or you'll miss something, sure.

OPEN FORUM

To the Editor of the Pharmakon:

During the last few years advantageous and progressive ideas have been incorporated into the curriculum of the Pharmacy School. This fact certainly deserves commendation and the Dean and the Faculty should be lauded for their earnest, untiring efforts put forth to develop the evidenced improvements. In the "hustle and bustle" of rearrangements and reorganization of courses an important and essential department has been overlooked.

Ever since the birth of the School of Pharmacy agitation for outside activities has been lacking; inter-pharmaceutical-collegiate activities have not been stimulated or even suggested. It is recognized in Pharmacy, that unity is lacking; nothing exists that would draw the interests of the various *Pharmaceutical* Schools toward each other. I believe that the best way to promote a closer relationship between the Pharmacy schools is to stimulate the development for something that would be in common and of interest to all schools. To my mind, by inciting competition a closer relationship is bound to come.

A factor that would lend to such a creation of closer relationship would be to organize a debating team at this Pharmacy School. How would a debating team prove effective? First, a debating team would create an opportunity for Pharmacy School of Western Reserve University to debate certain pharmaceutical questions at drug-gist's meetings, thus advertising the school; also it would create a public interest in subjects of a pharmaceutical nature by discussing such problems in public meetings. Second, a debating team in the School of Pharmacy would develop a greater interest among the student body in important pharmaceutical questions; it would open the field for Inter-Pharmaceutical Collegiate debates, thus promoting a more intimate affinity between the schools. Also the establishing of a debating team would be in accordance with the progressive policies of the school.

A debating team should be organized. It will succeed and prove its worth. Let's give it a trial. I suggest that the Student Council of this school sanction the organization of a debating team and that the Student

Council select a chairman of the team so that work may begin immediately. With the proper support from the Student Council and the backing of the student body, I feel confident that a debating team would soon earn the rank as being an important, progressive department of the school. Thank you,

Maurice H. Cole.

Editor's Note:

We believe that debating teams have been sponsored by the Pharmacy Departments of the University of Michigan and the Medical College of Virginia and others. While some may question the fitness of such an activity in a professional school, we believe the above letter merits consideration. Let's hear from others.

STATE BOARD NEWS

The graduates of Reserve Pharmacy School who passed the State Board of Pharmacy examination for Registered Pharmacist last June are: Lawrence H. Baldinger, Ph. C. '28; Albert Fine, Ph. C. '28; Jack Franklin, Ph. G. '26; Joseph Iskowitz, Ph. G. '26; Donald B. O. Kessler, Ph. C. '28; Samuel L. Krenitz, Ph. G. '25 and B. S. '27; Merle Myers, Ph. C. '28; Peter Palsis, B. S. '28; Rudolph A. Schreiner, Ph. C. '28; Lawrence J. Snyder, Ph. C. '28; Morris Spiegel, Ph. G. '26; Vincent J. Stark, Ph. C. '28; Anthony Vitale, Ph. G. '26; George Wagner, Ph. G. '22; those who passed the Assistant Pharmacists' examination are: William Moody, Ph. C. '28; Felix J. Swiatkowski, B. S. '28; and Alfred Zarlengo, Ph. C. '28.

The following students who are still in school also passed the assistant examination: Ralph W. Blakeway, Maurice H. Cole, Milton E. M. Geiger, Joseph W. McElroy, Maurice Schoenberg, Carl J. Shane.

NECROLOGY

Mrs. W. M. Fox, mother of Willard Milton Fox, Jr., B.S., 1925, died on October 18, 1928. Mr. W. M. Fox, Sr., is a member of the N. O. D. A. School Advisory Committee.

Miss Corinne E. Coblentz, Ph.G., 1921, died on September 18, 1927, in Stockton, California. We have just received this information from a sister of Miss Coblentz and as this was written to us we do not have any details.

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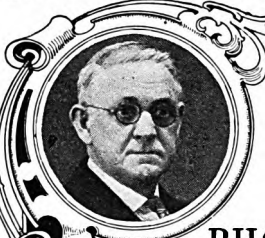
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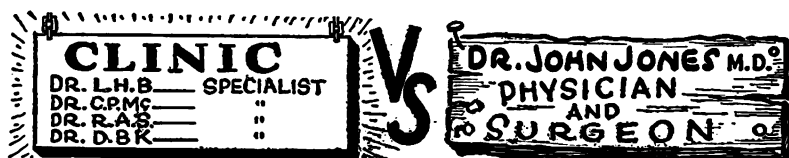


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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy



THE GROUP PLAN OR PRIVATE PRACTITIONER?

In this day of changing ethics in medical practice, the profession is engaged in a stirring dispute over the respective merits of the clinic or group plan of medical treatment ring as contrasted with the advantages to be gained from the "family doctor" or the private practitioner; while the laity and the professions closely allied to medicine look on and wonder what the outcome will be, what advantages or disadvantages they will reap with either system in vogue.

The writer is neutral to both parties in the controversy and is primarily interested in the changes produced in the profession of pharmacy by the existence of either or both systems. The pharmacist of today fills a great number of prescriptions from private doctors and also many from specialists, who, in addition to holding a position in some clinic, have offices where they function as private practitioners. He receives few, if any, prescriptions from the clinic proper, so that should the group plan system flourish, his business will be forced to rely upon other pharmaceutical endeavors.

In the July, 1928, issue of Harper's, Dr. Joseph Collins declares himself in favor of the group plan, and gives as his first and fundamental reason the fact that organization is essential in medicine in order to make possible not only the doctor's self-preservation but also his self-betterment; also to benefit the patient by reducing the charges which he would normally pay to a private practitioner for individual medical service. In order to offset any argument that medicine has sufficient organization in the American Medical Association, Dr. Collins defined that body's purpose as one concerned in the improvement of medical education and the elevation of the whole profession. The Association was founded primarily for the benefit of the doctor, but to be sure the sick have benefited enormously, for the doctor of today is quite unlike his predecessor in training and equipment. Today physicians are as well trained in this country as they are anywhere; but they persist in practising medicine individually, and the result is increasing dissatisfaction on the part of the public and growing discontent on their own part with the rewards of the profession. The latter

complaint is the one most commonly heard by the pharmacist in the small corner store when the doctor from upstairs or around the corner comes in for his afternoon session in the back room, bemoaning the gradually decreasing number of patients.

In the December, 1928, issue of Harper's, Dr. Wingate M. Johnson, in an article glorifying the family doctor, gives his reasons for believing that the private practitioner is needed just as much, if not more, than the specialist. Dr. Johnson's article was written as a refutation to the one by Dr. Collins, to whom he refers repeatedly, and, although he admits the veracity of several statements of his opponent regarding the merits of the group plan, he is opposed to it as a substitute for private practice, stating that to replace all private practitioners by clinics is as absurd as to say that all our retail grocery and clothing stores should be replaced by ten floor department stores.

Dr. Johnson names two glaring fallacies—as he terms them—frequently set forth by those who advocate group medicine as a substitute for the individual family doctor. The first is that all patients who consult doctors need exhaustive examinations to

find out what is the matter with them. The second that modern medical skill can solve all medical problems—that "it has taken its practice from the realm of guesswork to the realm of certainty."

To prove that most medical problems can be solved with comparative ease by any competent well-trained medical man, Doctor Johnson gives a brief account of a day's work, comments on the diagnoses he made, the treatment he prescribed, and asks whether any clinic could improve upon his work. Obscure cases, admits Dr. Johnson, which tax every resource of modern medicine are occasionally encountered, but what conscientious physician will refuse to recognize his limitations?

Regarding the second fallacy held by advocates of group practice that modern medical skill can solve all disease problems, Dr. Johnson dryly comments that after having seen in a number of cases the most highly-rated clinics in the country fail to reach correct conclusions, he realizes afresh that Hippocrates "knew his onions" when he said, "Experience is fallacious and judgment difficult." Dr. Johnson quotes from an article in a recent *Journal of the American Medical Association* by one of the greatest medical teachers in America:

"The greatest difficulty confronts us in attempting to determine whether a given group of symptoms is functional or structural in origin. The symptoms and even the laboratory observations may be the same in two cases, yet one may be organic and the other functional. Every surgical clinic affords proof of the errors arising through this mimicry and every practising physician has regretted experiences that prove to him the fallacy of the ordinary criteria of disease. What can help us in such a doctor's dilemma? Perhaps that heaven born gift, intuition, the subconscious psychologic insight which comes to us when we study the patient personally. It is because it tends to neglect that subtle insight that I am not favorably disposed to the hopper method of studying cases which obtains in certain clinics. Such a method precludes the utilization of the sixth sense."

As another argument against the clinic, Dr. Johnson bewails that loss of the sympathetic bond between doctor and patient in

the group plan. He asserts that to the clinic doctor the patient is just another problem; and that the scientific attitude toward him is apt to be developed to such a point that his emotional side is forgotten. To illustrate his point Dr. Johnson cites an example of a good woman who went to one of the greatest clinics in the country for relief from intolerable headaches. In her youth she had been married to a dissipated wretch who died in a few years. A blood test showed that she was infected with syphilis—a legacy from her husband. It had attacked her nervous system and was responsible for the headaches. The chief of the clinic—whose name is a household word in America—told her, with frankness, unbelievably brutal, the exact nature of her trouble. He told her that her only chance of recovery was by intravenous injection of salvarsan, that even so she would not live long and might become insane before she died. It would have been far more merciful to shoot her. The poor woman, innocent as a newborn babe, when she heard the name of her disease felt as though her soul as well as her body was doomed. Almost immediately she lost her reason, refused to eat, and soon died. Any worth-while practitioner should have been competent to have had the blood test made, and surely a tactful, kindly man could have given her the necessary treatment without letting her know what it was all about.

Still another argument against the group plan, there is the great danger that in the multitude of counsellors there will not be any one man to feel actual responsibility for the patient as will the individual doctor.

To any intelligent reader who has kept up with our magazines and best sellers for the last few years in even the most desultory fashion, it must be evident that the medical profession has been getting more than its share of criticism. This is no doubt due to the wave of skepticism, unrest and dissatisfaction prevalent since the war. The medical profession cannot hope to escape its share of criticism but Dr. Johnson seems to think it has received more than its rightful share and feels that the rapid multiplication of specialists, real and self-styled, and the commercialization of medicine by group practice are at least partly to blame; he feels too, that the present fashion—that of emphasizing the importance of the specialist and of minimizing the general practitioner—

is unfair since it requires just as much brain power to minister to the whole body as to treat a section of it and requires as much personality to keep a family satisfied as to use the magic word "specialist" as an aid to confidence. Dr. Johnson does not wish to belittle the specialists because he realizes their importance and sends a great number of patients to them, but he does wish to glorify the family doctor. As it was in the beginning, is now, and always shall be, the family physician must be the bulwark of defense against the ills of the average family.

Dr. Collins, in enumerating the advantages of the group plan, states that the ordinary, average citizen—the self respecting, self supporting, substantial member of the community—is often denied the medical service to which he is entitled because he cannot afford it. The trouble is not that the physician exacts a fee beyond the patient's means, but that the patient must go to so many physicians before he can find out what is the matter with him, and then to so many more or their subordinates to get cured. If the first physician consulted by him combines insight with experience he may be able to make a right diagnosis but it will often be little more than a shrewd guess.

It may be said that group practice is adapted to ambulatory patients, but not to those seized suddenly and even violently with illness. It should be peculiarly adapted to them. There are three reasons for diagnosing acute diseases correctly and promptly: that the patient may be submitted to an operation, that he may be immunized, or that he may be segregated. The diseases that require segregation may be diagnosed by an individual; but to detect and interpret satisfactorily the majority of those who require operation or immunization one must have the services of a laboratory.

Team work, as exemplified by the group plan, encroaches upon a privilege that many of us seem to enjoy, that of being a dictator, but it transfers the bulk of our work from the realm of guesswork and conjecture to one in which certainty and exactitude may be at least approached. The chief obstacle to group practice is the temperament of the doctor. The more of a "prima donna" he is, the less desirable he will be as a member

of the firm. Physicians come to power so early in life that it often takes longer for them to acquire a salutary amount of humility than it does for others whose work is "checked up" from the beginning. For this reason candidates for medical firms should be caught while still plastic and malleable. Group practice they will find will tend to correct some of the physician's deformities such as envy, jealousy and covetousness.

Dr. Collins admits that group practice is not the ideal method of practising medicine. The ideal way would be for the physician to have his own laboratories and as many assistants to make examinations and investigations as necessary, leaving for him that upon which so much of the success of his practice depends, namely the personal relation with the patient.

In the midst of this controversy, what about the pharmacist? Shall he too join the medical firm to do his share in the dispensary or shall he stick to his private store and trust that his share of prescription work will result from the group plan. True, the clinic offers excellent opportunities for a small number of pharmacists, those well trained in all phases of their work, but what about the rest, should the group plan prove popular? However, precarious as the situation seems to be at the present time, I think the pharmacists have little to worry about since general opinion seems to favor the private practitioner, which of course is excellent for the profession of pharmacy; and should the group plan ever gain the upper hand, pharmacy, whose history is as old as that of medicine, must and will have its say in the dispensing of drugs and in the alleviation of ills of mankind.—Lawrence Baldinger '29.

DID YOU KNOW

Did you know—

That there are 3,000,000 lepers in the world?

Did you know—

That the Chemical Foundation has contributed a fund of \$195,000 to John Hopkins University in Baltimore for the purpose of studying the origin, cure and prevention of the common cold?

M. S. AS SEEN ON A DIPLOMA

The theory has often been advanced that the position of the pharmacist today is due to the fact that he has been too eager to make the almighty dollar, at the expense of his professional rating. As we see pharmacy today we wonder how any man can acquire the necessary knowledge, required to practice pharmacy as a profession, in the short term of two years. With the initiation of the three year course a more proficient product was produced. The four year course has already proved its merit, in making a professional man.

We are glad to say that a few of our graduates have foreseen even greater possibilities in their chosen field. We are indeed quite fortunate here at Reserve in the fact that graduate courses may be pursued in the same environment that served as a background for our undergraduate work. With Dean Benton, as dean of the Graduate School, great strides are being taken to enlarge the scope of available graduate courses here at W. R. U. We find that our own graduates are at present taking courses in many other departments of the University. The question might arise in your mind, if you have not progressed in school so far as to begin thinking of an M.S., as to how long would it take you to get a master's degree. Well, the best that we can say is that it requires 24 credit hours for graduation, over and above a B.S. degree. Besides you must have the requisite number of undergraduate courses, in the line of work which you intend to pursue in graduate school. Certain undergraduate courses are given two-thirds credit as graduate courses and others, listed as graduate courses, are given full credit. Besides it is required that a certain amount of research be done by each candidate for the degree. Better be checking up on your present course of study if you are thinking of finding an M.S. on your diploma.

It might be interesting to check up on those of our own number who are recruits in Dean Benton's army.

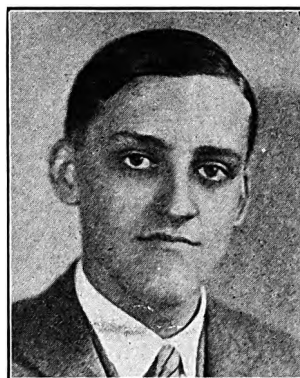
William W. Hosler

Hosler is a "pedagogue", a "benedict" and a dispensing pharmacist. He has won great favor among the students as an instructor in pharmacy and by his intense interest in pharmacy school athletics. His great interest in the student body calls forth the best wishes for his ultimate success from each individual student. Chemistry is the preferred subject of Mr. Hosler. His research work is centered on an endeavor to establish physical constants for a number of the hexyl alcohols. We picture Mr. Hosler as the head of a manufacturing chemical concern ere another decade has passed.



Robert P. Stockhaus

Quiet, conscientious, ever, always on the alert—these words characterize that fellow who has charge of our manufacturing laboratory. Little passes the attention of our friend "Bob." At the present time he is taking a course in advanced organic chemistry as well as a course in food and nutrition. It is Bob's earnest hope that he may be able to continue and obtain a Ph.D. and become one of our foremost pharmacognocists. This fellow looks like the type of man who is going to discover that little detail that his predecessors overlooked. Furthermore he has the knack of selling his ideas to his associates in a way that depicts a keen mind and logical thinking.

**James Spear Neely**

Perhaps "Jim" was fed on baked pumpkin when he was a boy back there in the hills of Pennsylvania. Apparently he has developed a mania for that member of the Cucurbitaceae, for all his discussions lately have been pumpkin talk. Jim is hoping that he will be able to introduce a 10 milligram dose, for this taenifuge, into the U. S. P. XI, replacing the old 30 gram dose of the tenth revision. You have no doubt seen the "creeping things" that he has in his desk. No! he is not a fisherman, but a scientist seeking a humane way of executing intestinal parasites. Jim is also doing research work on the hexyl alcohols.

Milford Harris

Harris has tackled the problem of setting standards for cascara. After hydrolyzing, shaking out with chloroform and evaporating various extractives of the drug, we find him examining his evaporating dish with the keen eye of a "Nimrod". While he at present is working especially on the anthraquinones he intends to major in pharmacognosy. We shall be carefully watching the A.Ph.A. Journal for a method of assaying the emodin group of drugs.



LEPROSY AND CHAULMOOGRA OIL**Leroy D. Edwards****Demonstrator in Pharmacy**

Chaulmoogra oil, a new drug in the U. S. P., is regarded by many as a cure for that loathsome disease, leprosy. Leprosy is the *Lepra* of the Arabs, the *Elephantiasis* of the Greeks, the *Spedalsked* of the Norwegians, the *La Lepre* of the French, and the *Aussatz* of the Germans. It may be defined as an infectious disease, which develops with periodic exacerbations, and is caused by a special microbe, the *Hansen Bacillus*.

It is no great task to prove that leprosy has existed since the earliest times, but it has also been pointed out that this disease was, in early times, confused with many other contagious diseases; hence, the *Zoarath* of the Bible has nothing in common with the genuine leprosy. At this time, however, leprosy was, more or less, confined to India, Egypt, Greece, and China. After the crusades of the Middle Ages, it became widely distributed in Europe. During the 14th and 15th centuries, the disease was common throughout the British Isles. The Negro slaves of Africa and the early Spanish settlers carried the disease to the West Indies, Mexico, Central and South America. It reached the United States in the same manner.

Today, Great Britain, Belgium, Switzerland, Germany, Austria, and the United States are practically free from leprosy. Lepers are, however, more common in Norway, Italy, Spain, and Algeria. In the Balkan Peninsula, Southern Russia, Baltic Provinces, and Iceland, leprosy is fairly common. The most gravely infected countries are Hindustan, Persia, China, Latin America, Africa, the Phillipines, and Sandwich Islands. It is of interest to know that in the United States cases have been reported in Louisiana, Texas, Florida, South Carolina, Indiana, and some other states.

In summing up, we can say that leprosy is an ancient disease of mankind and respects of race, age, sex, social station, climate or latitude.

For many years, Chaulmoogra Oil was used by the natives in India for the treatment of leprosy, but the procedure was not considered to be a cure; hence, the victims of this disease were driven in exile to die. This condition was due to the fact that the oil was administered only by mouth. When

the oil is given in this manner, it has little curative value, and also brings about a severe digestive disturbance.

The first use of subcutaneous inoculations were made by Tourtoulis-Bey of Cairo, in 1899. Varham, Stevenel, and Noc were the first to give chaulmoogra oil intravenously. They gave the oil in the form of a fine emulsion, but their doses were very small. They did, however, obtain good results.

Harper, Medical Supt. of Makogai Leper Asylum, Fiji, in an article on the treatment of leprosy, discusses the value of several methods. He states that the intravenous injections of tartar emetic is useless. The intramuscular injection of the ethyl esters of chaulmoogra oil is very expensive as well as painful. The intravenous and oral administration of sodium hydnocarpate is expensive. The intramuscular injection of chaulmoogra oil in various mixtures, chiefly according to Heiser's formula, is valuable yet painful and causes fibrous degeneration of the muscles. Heiser's formula is chaulmoogra oil 60 cc., resorcin 4 grams, camphorated oil 60 cc. Harper considered the most desirable method to be the intravenous injection of crude Chaulmoogra Oil. His method of procedure is to sterilize the oil by heat, and to inject 5 to 15 M. of the oil two or three times daily. A fortnight's rest is given at the end of each four weeks of injections. The treatment is continued until the "treatment reaction" is noted. The procedure is then halted until the reaction is over. He maintains that any method of treatment must be accompanied by regular meals of abundant food, including milk, open air life, gentle exercise, daily baths, and happiness of mind. In his conclusions, he states that early or mild cases may be cured or arrested, advanced nodular cases are incurable, leprosy actually prolongs life, and that lepers, as a rule, do not die of leprosy.

Wade, in a series of articles, states that 0.5% iodized preparations are in several respects distinctly superior to the 2% iodine preparations, and compare in no important way disadvantageously with the plain drug. He states that this method may, therefore, be considered as one of the best for routine anti-leprosy treatment.

Warren writes that the literature seems to show two systems of treatment for leprosy with Chaulmoogra Oil. One involves the use of the mixed ethyl esters of the fatty acids

of chaulmoogra oil by deep intramuscular injections with the free fatty acids from the oil being used internally to supplement the intramuscular injections. The other method employs the use of the sodium salts of the fatty acids of chaulmoogra oil, for the most part intravenously.

The botanical origin of Chaulmoogra oil was shown by Power in 1902 to be *Taraktogenos Kurzii*, King. This name was given to the Chaulmoogra tree by Sir George King in honor of its discoverer, Kurz. The tree is known by the natives as the Kalaw tree. Some few years ago Professor Rock, of the United States Department of Agriculture, was authorized to obtain seeds of the *Taraktogenos Kurzii* to be introduced into Hawaii with the view of establishing Chaulmoogra plantations. In a very complete article in *The National Geographic Magazine*, Mr. Rock describes his voyage through Siam and Burma, and of his location of a pure stand of Chaulmoogra trees near Kyokta, Northwestern Burma. The trees are tall and handsome. The fruits are described as being about the size of a large orange with closely packed angular seeds.

Chaulmoogra is usually described as a fatty oil expressed from the seeds. The drug is a brownish yellow oil or soft fat, has a characteristic odor, and a somewhat acrid taste. The melting point is 22-30°C., specific gravity 0.940 at 45°C., saponification value 198-213, iodine value 96-104, and acid value 21-27.

It is stated in the Power report that Chaulmoogra oil contains Chaulmoogric acid, $C_{18}H_{32}O_2$, Hydnocarpic acid, $C_{16}H_{28}O_2$, Palmitic acid, and Phytosterol. Chaulmoogric and Hydnocarpic acids are members of the cyclic acid series $C_nH_{2n-4}O_2$. The detailed description is as follows: melting point 22-23°C., specific gravity 0.940 at 45°C., acid value 23.9, saponification value 213.0, iodine value 103.2, rotation plus 53.0°.

To say that Chaulmoogra Oil is a specific for leprosy, would be, to use a popular phrase, jumping to a conclusion. Even the most ardent supporters of the use of Chaulmoogra Oil in leprosy are very conservative in their statements concerning such treatment. However, the fact is often pointed out that Chaulmoogra Oil, in one form or another, will cause, if administered over a sufficiently long period, a disappearance of the leper bacilli and the lesions of the disease. The patient exhibiting this ap-

parent cure is discharged from the hospital, but he must report from time to time for an examination. Sometimes the disease reappears, and in some cases it does seem as though the patient has been cured.

In conclusion, we can say that mankind has in chaulmoogra oil a medicant which acts very favorably against leprosy. Time and experimentation will prove the true curative value of Chaulmoogra Oil when used to combat leprosy.

A NEW TAPEWORM

In eating the flesh of an animal—flesh, fowl or fish—one always runs the risk of infection with uncanny parasites of some sort to which all animals and especially flesh-eating animals are more or less subject. Fish in particular are highly subject to intestinal parasites. Fortunately most of these do not thrive in the bodies of human beings and until recently the people of this country have been free from a certain sort of tapeworm known as the fish tapeworm, which is exceedingly common in Finland.

More than thirty years ago Professor Warthin, of the University of Michigan, an eminent pathologist, predicted that the fish tapeworm would in time become common in this country because of the fact that a large number of Finns were settling in northern Michigan and were pretty certain to bring the fish tapeworm with them. It has recently been discovered that Doctor Warthin's prediction is coming true. The fish of our great lakes become infected through sewage, especially in the upper lake regions, and the people of the southern part of the State are now becoming infected through the eating of fish caught in the upper lake region. Tapeworms are found in the flesh of fish in the form of small embryos which develop after the fish is eaten. In most cases the infection may be traced to the eating of raw or insufficiently cooked fish.

The health authorities are warning the people to avoid eating fish which have not been thoroughly cooked. A better precaution is to avoid eating fish at all. Of all forms of flesh food, fish are of the least value and most likely to do harm, not only because of their great liability to infection, but because of the readiness with which the undigested portions of the flesh of fish undergo putrefaction in the intestines.—Good Health.

AMONG OURSELVES

A strange coincidence to be sure; these two fellows, coming from the same habitat, in the same year in school, presidents of rival fraternities and still on friendly terms with one another. Mr. Porter and Mr. Baldinger both come from a town quite unknown to many of us, namely, Galion, Ohio. They tell us that they live almost directly across the street from one another. "Baldy" is president of Phi Delta Chi fraternity, here at Reserve, while "Porter" is the presiding officer of the local chapter of Kappa Psi fraternity. It has been the ardent desire of these two fellows to reduce unnecessary and unfounded fraternal rivalry to a minimum. "Fraternal Altruism" has been their slogan and as they are about to go out of office we hope they have implanted the altruistic spirit in the minds of their successors.



Robert M. Porter

This is, of course, not the life history of a successful man, but it is the history of the successful beginning of a young man, preparing himself for the business world.

Robert Porter is the son of a Presbyterian minister, a clergyman of extensive education. It is no doubt to him that Bob owes his fluent speech, his leaning toward writing, his readiness to make new friends and his ability as a "good mixer". He was born in New Castle, Pennsylvania. He worked for two years, after leaving high school, with the Grasselli Chemical Company, as one of the Electrical Maintenance unit. Moving to Galion, Ohio, he obtained a job with the Northern Electric Manufacturing Company, installing private automatic telephone exchanges. From these two, he acquired a worthy knowledge of electricity, one of his many accomplishments. After five months, he entered Wooster College, studying liberal arts. Two

(Continued Next Page Col. 1)



Lawrence H. Baldinger

It is indeed a pleasure to write a biography of a friend and schoolmate such as Mr. Lawrence H. Baldinger. In the three years that I have known him, and in searching through his history, prior to our acquaintance, I find only good things to tell you about him.

Mr. Baldinger, better known to us as "Baldy", son of Mr. and Mrs. Edward N. Baldinger, was born January 12, 1907, in the little city of Galion, Ohio. He received his early education in the grammar school of Crestline, Ohio.

Early in life "Baldy" was forced, by the death of his mother, to help himself. His early ambitions and desire to push forward led him to enter the high school of Galion in 1920. He chose the collegiate course, specializing in science, and defrayed a part of his expenses by working for pharmacist Fred E. Barr. In the drug store "Baldy" found his favorite vocation, and soon be-

(Continued Next Page Col. 2)

years later he turned to Pharmacy School. With his two previous years of college work, he required only three years of Pharmacy to obtain a B.S. degree, which he will have accomplished this coming spring.

In the meantime he has done and is doing many things of note and doing them well. Last year Bob directed the production of the first Pharmacy School Annual that was produced apart from the University Annual. He tackled the job and with his usual ability to secure cooperation, turned out a successful book. This year he is doing the same with this periodical, the *Pharmacon*, as its editor. At the same time he is working hard as assistant editor of the *Northern Ohio Druggist*. These various occupations easily prove that his literary ability is high.

Although decidedly classical-minded, his scientific pursuits are a success, having landed him the place of Student Assistant in Pharmacy. Another of his positions, that uses a great portion of his time, is his office as President of the local chapter of Kappa Psi Fraternity. It is here, most of all, that he gets his opportunity for making acquaintances and finding lasting friends. Especially did Bob enjoy his trip to Portland, Maine, last year, as one of the representatives of the Chapter at the National Convention. Here, while enjoying himself fully, he put forth his business abilities and accomplished some good work. But conventions are not new to Bob. They are in fact, his "meat."

So, just as he was active in young people's organizations before his entrance to college, so he has had enviable success as an executive since. He is just the kind of a leader that draws the cooperation of everyone, enabling him to put across his tasks with banners flying. I can't imagine Bob closed up in a laboratory, working through life as a lonely, silent technician. Rather do I see him, in the future, sitting behind a polished mahogany desk. On the right corner of his desk is a pile of papers which he is preparing for the next issue of the *Journal* of which he is editor. On the left corner, he has stacked his work concerning his reputable drug house of which he is business executive. He has just sent out notices for the next meeting of a convention over which he will preside. But meanwhile, he is busy—he is shaking hands with a new acquaintance, adding another name to his already long list of friends.

O. WOLFERT.

came a valuable asset to Galion's leading pharmacy.

In high school he was a leader in the social and scholastic activities. He made his debut into the world of journalism as a charter reporter of the high school paper. Later this paper thrived under his editorship. He managed a subscription campaign for the high school annual. Mr. Baldinger graduated from high school with second honors in 1924, and we haven't the slightest doubt that he would have been second to none if unhampered by outside work.

After leaving school "Baldy" spent a year collecting the necessary funds for college entrance. Thanks to the influence of Fred E. Barr, former student of Dean Spease at Ohio State University, he chose Western Reserve School of Pharmacy as the place to get his higher education.

"Baldy" entered Pharmacy School in the fall of 1925. He pledged to Phi Delta Chi Fraternity and later became a member of this organization. His class mates soon recognized his merits, electing him to represent them two successive years on the student council, and two terms as class secretary. "Baldy" won the much sought freshman scholarship, and held the scholarship throughout his four years in college. During his freshman year he accepted a position with the Cleveland Press. Despite the time and energy required by his school work he rose to night supervisor of his department, and has been entirely self-supporting while in college. Among his varied activities he deserves favorable mention for his efforts on the "*Pharmacon*". Ever since the first issue of this publication he has been on the reportorial staff, and we are indeed sorry that his heavy schedule and outside work forced him to resign from the editorship. In the fraternity the long list of offices which he has held, among them president and vice president, speaks for itself.

We are glad to see "Baldy" back to work for a B.S. degree after receiving his Ph.C. last year, and passing the June State Board. A man who has done so much for himself and others surely must make a place for himself in the business world. Next year "Baldy" will go to Graduate School for the degree of Master of Science, and we extend to him every wish for continued success.

R. KOCH.

EDITORIALS

Our Pharmacon may serve as a medium of communication to many and varied types of people. Our paper as you all know goes out to all of our alumni as well as to every other school of pharmacy in the country.

What Should a Paper Such As This Embody?

We do not send them this publication as a substitute for a birthday or a Christmas card. Then why do we send it out to these people? Primarily because we want them to know just what kind of an institution we have here at Old Reserve; just to let the old Grads know what progress has been made since they were in school. To do this we needs must publish fraternal news, alumni news and other extra curricular activities common to all of the student body. Then we ask, Why write technical articles? First of all, we profess to be a professional school and have an interest in pharmacy as a profession. To sell any one your ideas you must be sold on the idea yourself. If we would inform the drug trade that we believe firmly in ethical, professional pharmacy we must furnish the evidence that we ourselves are professionalists in embryo. In as much as this journal offers an opportunity for self improvement to the contributors it cannot be denied that the writing of a technical or semi-technical article oftentimes brings to view many angles of the subject not discovered otherwise. In the allotted time given to the teaching of pharmacy it cannot be expected that every angle of a certain subject be touched. Therefore we endeavor to expand on some of the various lines common to pharmacists. Why write commercial articles, such as chain store competition, etc.? Because we cannot deny that any line of work, regardless if its professional rating, has not in the last decade developed a more or less commercial angle. This commercial angle threatens to ruin the personal touch of professionalism. We as students need to know before we enter the field just what it has to offer. Should a

paper such as ours feature articles such as "sermonettes", jokes, cultural articles and the like? Well we are after all, not publishers, but college students, so let's be collegiate.

The "Open Forum" is open to all, so let's hear what you would like to have published in the Pharmacon. What would you like to write for the Pharmacon?

Last year we published for the June edition of the Pharmacon, an elaborated copy to serve as an annual. The edition served its mission quite well. It is time that the student body begins thinking about the coming graduation number. What shall it be? Who wants the job of editing it? To be sure it is no small job especially with the present available funds. If an editor were available he could do much right now toward getting his material together. Campus scenes and snapshots would do much in brightening up those solid pages. The annual pharmacy school dance would furnish several pages of material if properly handled. What do you as students want and how are we going to get it?

In the last issue a letter was published on the subject of debating. This is quite worthy of consideration.

Pharmaceutical Eloquence

I would refer you to the article in this edition by B. C. Forbes on "Should Business Men Make Speeches?" Perhaps we say that the pharmacist is just as good a speaker as the doctor; perhaps so. The doctor of tomorrow and the younger doctor of today with his pre-college training should be a very efficient speaker. There is quite a difference in being able to talk in public and being able to speak (say something) in public. Like many other reveries that are brought to one's ear it remains for some one to get behind the movement and make it a reality.

It is almost laughable nowadays as to the various ways and means we resort to in order to gain a point for ourselves. Ever since the chain drug store entered the drug field we have heard wailings from the individual owner to the unsympathetic, uninterested and economic public that a great monster was about to crush him. Little does the public care about our financial worries so long as our competitor is going to save him money and lighten his financial burden. The druggist was not the only one to lament. The grocer, the cigar merchant and others had even more grave situations to meet. What was the individual's recourse to be? He just couldn't afford to wake up and keep up with this modern trend. True he could not afford to cut his prices as did the corporation with many times the buying power. Yet he realized that his competitor was saving his customers money on many lines of goods. What could he give that his competitor could or did not. To a few they saw an opening for personal concern and attention to each customer and his wants. This attention and subsequent service could not be given by the machine-like chain. In other words the individual sold himself as well as his wares. With the professional druggist this carried along, unknown to the druggist perhaps, an education to his clientele.

The immovable individual on the other hand summoned aid in the form of legislation. Four or five of the southern states passed laws forcing chain stores to pay a tax. These laws were ruled unconstitutional. In the state of Pennsylvania we have a still more radical step taken, passing a law requiring that all stock holders in a drug store should be registered pharmacists. This too was defeated. As we are about to graduate and ready to go out into business for ourselves it would be "kind of tough" if dad offered one of us the necessary money to start up in business, on the condition that he was to have an interest for a few years to oversee things. Under the Pennsylvania law, Dad not being a registered pharmacist we would be unable to open a store or receive a state board permit. The shrewd

business men who are backing the chain idea, have foreseen the folly of such a policy and have formed the National Chain Store Association with the intent of spreading a propaganda campaign over the country to educate the public on the advantages of chain store buying, etc. Let our legislation be obtained in prophylactic or curative doses rather than in minimum lethal doses.

Great effort has been put forth by the manufacturers during the last few years, since the World War in fact, to woo dollars from the unsuspecting public. He has been so dashing

Financial Romance and Cut Prices

in his attentiveness to the hypothetical needs of the unsophisticated consumer as to win for him the distinction of a young knight. The American people are credited with being a thinking race and rightly so. Has not the mere suggestion of hypothetical needs brought millions of dollars into the coffers of the capitalist? Halitosis has become a malady that thwarts the prosperity and advancement of all American progress. "Four out of five" have felt the approaching necessity of artificial dentures. General laziness has been laid to a definite cause. The powerful magnifying glass of the family physician has laid bare the fact that "From the throat to the colon is one continuous tube. Here is where 90 per cent of the trouble lies." In other words it is a disgrace to be lazy, for all we need is an internal wash. The coy public believes it and will pay any price for an article that will make him or her socially correct or above social criticism.

It is no effort at all today, from a financial standpoint, to have in one's possession the finest and latest in home improvements and labor saving devices. The easy payment plan takes care of all your worries and you are "up with the Joneses". "A five dollar deposit and you can drive a car on your vacation—we take the risk." In this line of commodities the coy public has again responded to the seductive strains of the wooing producer and after a few contracts have been signed for the "ultimate" title to the commodities the consumer finds himself bound hand and foot. After dividing his monthly salary, as a bigamist to his wives, among his debtors he finds that he has very

little left with which to supply his every day needs. The payments on the wife's fur coat, the radio, the living room suite, the new washer, the family car and landlord's rent have taken the greater part of his stipend. Before the next pay comes around he finds himself in need of personal toiletries such as shaving cream, tooth paste, razor blades and perhaps the baby or the wife is in need of a tonic. At the same time he finds that he has but a few dollars in his pocket. Why of course he will walk two blocks farther to get it a few cents cheaper for he has not yet bought his week's supply of smokes and what he can save on his tooth paste he has been taught to believe (hypothetically) will buy the baby the much needed pair of shoes. The financial wooer is the espoused of the hypothetical American consumer. We assume without proof. When we awaken we will find ourselves weighed in the balance and found wanting. Cut prices are our quack doctors.

We note in looking over the text for this issue the expression "Fraternal Altruism."

"Fraternal Altruism" Webster defines altruism as—opposed to egoism or selfishness, regard for the interests of others. We have here in this university as many national fraternities as any other school in the country. Besides we have the casual acquaintances of fraternity men from our adjoining school of applied science (Case). We have in our department three national fraternities and one national sorority. The primary aim of all four of these organizations is to make better pharmacists. With such a fraternal atmosphere as we are exposed to, our fraternal life here at Reserve should be of a superior degree. There were never two organizations organized for the carrying out of the same purpose, that the one did not feel that its way was the better path to the desired end. We recall the familiar expression that two heads are better than one. Surely then four such organizations as we have here in pharmacy school should do wonders for our Alma Mater.

Are we as "Fraternalists" so near-sighted that the possibilities of "Fraternal Altruism"

have never, as yet, come within our range of vision? Are we astigmatic in our outlook as to what W. R. U. has to offer us, thus obtaining an imperfect image of true college life and spirit? Better we were even a little far-sighted in order that we might see ahead of time, a possibility for the utilization of two, three or even four organizations to promote pharmacy as a profession and aid our school in its endeavors.

The fact that a certain man does not shake hands as you do is no indication that he can not be of some help to you. Steinmeitz came to this country and could not even speak our language. What would America have lost if she had not shown an altruistic spirit? Let's try it out!

It is not an uncommon thing for a pharmacist to call the office of our school and ask for the name of some student, not registered, who can fill prescriptions. Dean—we extend to you our deepest sympathy. To

be sure we are gratified to know that the drug trade places as much confidence in the "embryo" as to give us a "ring". The idea of apprenticeship is by all means a commendable one. It is an indisputable fact that much can be learned in the retail store that cannot possibly be acquired in school. It is also quite true that there are a number of students in school who are quite well qualified to carry out a doctor's order. However the fact that a man is going to a school of pharmacy is no criterion as to his efficiency as a prescriptionist. The fact of the matter is that the average call for such help carries with it the suggestion of cheap labor which implies the recommendation of an underclassman. Many pharmacists of an older school do not know that the freshman of today obtains very little training in the art of compounding and dispensing. The personal factor must enter into such cases.

The question naturally arises: What sort of training will the pharmacist give the student? Will he put him in complete charge of the prescription room? Will he put him in charge of the store for an evening? Will he permit the student to work along with him, checking all of his work and instruct him when necessary? The sad part of it all is that the latter is too often not the

case. Cheap help is the motive. Other questions also arise to further complicate matters; what effect will it have on the student? Will he in a few month's time feel as if he had already mastered the art? Will he over-estimate his ability and as a result become careless and inefficient? Cases have been brought to our attention in the laboratory where hasty decisions based on over-confidence might have proven fatal. Besides the student is apt to acquire the "why go to school" attitude—I can do it now. Why be a registered pharmacist? It doesn't make any difference. Many pharmacists of the city have done a great work in helping students to become good pharmacists by proper apprenticeship. The "embryo" can either develop rapidly or deteriorate. It all depends on you.

We are in receipt of a publication from the Connecticut College of Pharmacy, called the *Pharmascope*. We hail with joy this venture on their part. It is a student publication and has for a goal a monthly publication. Mr. Walter R. Williams is the editor and we wish "Walt" the best of success as he takes up this worthy project and trust that he may feel well repaid as have those who have contributed to the *Pharmacoon*.

I wonder how many of us as students of pharmacy realize just what has been going on in our local organizations **N. O. D. A.** for the betterment of pharmacy. If you are at all interested in what is being done for you as a future pharmacist and just what the problems are that confront the local druggists, you had better drop in on one of their meetings. Very interesting and lively discussions are held and outside speakers of note are frequently heard from. The association has expressed its desire of seeing us there. The meeting place for the coming year will be The Statler Hotel. The meetings are held the first Friday of each month. If you want to attend the next meeting, which will be on February 1, 1929, let's hear about it and we will see how many we can get together. A goodly representation from our school would be appreciated by the association, I am sure.

The Editor.

AN INVITATION

We have just read Bulletin 169 of the National Wholesale Druggists' Association. We did not know our old time friend, Harry A. Bauman, of "Goodrich," to be a writer of "cubist verse," though we knew him to be versatile:

So Harry
of Akron
In Early Springtime—
Bring the Good Ship
"Goodrich"
That four passenger
Cabin air Cruiser
to Reserve
Where we can
Introduce You to the School
As guest
Poet, gentleman and friend.

W. R. U.

SUCCESS BY SERVICE

I know of two brothers, once newsboys, who have recently made an amazing success in the drug business, from a scratch start. After completing courses in pharmacy at an obscure college, they started in business with a total capital of \$300. In a few years that capital has grown to a value of \$244,000 and they recently put out, through brokers, an issue of common stock so much in demand that it was all sold privately.

The answer is that they built their business by doing little things that other druggists never thought of. To begin with, they emphasized their willingness to deliver articles, no matter how small. Once they even delivered a two-cent stamp. Indeed, so much of their business now consists of filling orders taken by telephone that they could close down their three stores and sell almost half as much as they do now.

But the delivery idea was not all. Every bottle used in these stores is of French flint, hand-made, bevel-edged to make them less easily broken, with the firm name blown in. Corks are longer than most corks and less easily broken. Each package is sealed in wax paper—for two reasons: Because the firm discovered that women like nice looking packages and to protect the package from being opened by the wrong person.—F. C. K. in *Nation's Business* for October, 1928.

AFTER GRADUATION WHAT?

A question of "What shall I do?", confronts every student who is about to complete his college course. It is quite natural for the person, whose graduation day is drawing near, to keep an open ear for the opinions of those men already successful.

Norman Beasley in *Forbes Magazine* gives us Henry Ford's answer to the question, "Should you go into Business for yourself?" Mr. Beasley asked the question: "Mr. Ford, if you were asked to give a young man advice on starting in business, what would you tell him to do—go into business for himself, or go with a large organization?"

Mr. Ford replied in the following discussion by first saying: "Let us examine that question. Does it imply that because a man is an employee, his ambition is therefore stunted and his initiative lost?"

"There is, probably, on the whole an increase of persons going into business for themselves. Modern industry has greatly increased the possible openings for private business—which is quite contrary to what many believe. It becomes a simple matter, then, of inclination and initiative on the part of a man:—what does he want to do?—get into business for himself, or go to work for some one else? Up to a few years ago a man got into business for himself because, as a general rule, it was difficult for him to carve a career in any other way. That is not true today. Employment is now offering man a career.

"Opportunities to acquire position and a competence are greater in employment than in private business. This is natural. There are more places to be filled, and the rewards are greater. Business lives by the vigor and the brains of the men it produces. Every big business needs more and bigger men than many small businesses could possibly need. Naturally, with a larger need comes larger opportunity.

"As a matter of fact the case stands about this way: employment has become a competitor with private business for the services of the best men. The idea that industry narrows a man's vision has never occurred to anyone in industry. There are all sorts of opportunities for men to get ahead by working for others. That is all we do anyway—just work for others."

When asked the question, "What about

the young man who feels he wants to do creative work?", he replied:

"The larger the industry the greater the scope for creative action, and the greater the need for it because only through creation and service can such organizations succeed.

"Look at business and see of what it consists:

"Private business and large business. Private business is largely competitive; large business is a matter of co-operation. The spirit of large business is one of common interest in the job—the unified thought and energy of many men. This being true, the man employed by a large business is better situated to give of his energies; in a private business these energies are divided.

"Something else: employment is at hand. The need for starting a private business, or the means to do it are not always at hand.

"If a man is starting a private business the one thing he must have is capital. That does not mean capital in the form of dollars. An idea is capital. Experience is capital. Naturally, some money is needed because money is a commodity of trade. But, more important than money is an idea; more important than money is experience.

"So, now we come to experience.

"Can a man best get experience in his own business or can he best get it in the employment of another man who has a surplus of experience and has erected the means of getting more experience? One learns by doing. If a man wants to get into business for himself he must, if he expects to make a success of that business, have experience—or, he must get it as he goes along. This is sometimes a costly process to his business. There is a way to get it at less cost to himself and to the public. That is by working for another man—watching how things are done, knowing why they are done and using his own initiative to improve on methods and systems.

"It doesn't make any difference whether a man starts in business for himself, or begins working for someone else, one thing is true of both methods—he must begin to work and he must learn his job. Most economic problems come in industry, because men, running businesses, do not know their jobs. Which means, if you want to turn it around, that most 'economic' problems in industry would be solved if the industries were managed by men who know industry.

"If a man goes to work for someone else he will, if he keeps his eyes and ears open, learn from the mistakes of his employers. From those mistakes—and they will not cost him anything out of his own pocket—he will learn what not to do when becoming an employer himself."

We may infer, therefore, that Henry Ford believes a man should start in working for someone else even though he does intend to go into business for himself later on.

"I have been twenty-five years building up this business so as to be able to start to work. I am just starting to work now. How much better for a young man that he come with a big organization, where he has all the background of the problem, all the tools to work with and all the incentives for work, than to begin in the small way he has to begin if he owns his own business? By the time he builds his own preparations, he has used up a good deal of time.

"Any business has to be built. It isn't just planted there as a big business right at the start. It has to grow. Grow naturally. The growth of what you have—if the people want what you make—will build a business, will build it steadily and soundly enough. Any business should grow out of the service it renders.

"The advantage to letting it do this is that you learn and are able to make improvements as you go along. By starting big the whole apparatus and organization are cast into the mould of making one commodity. The best way to stunt growth of a business through its lifetime is to start it out big.

"Men—and particularly young men—are prone to become impatient with time. They shouldn't be. Time is the one of the elemental forces which ripens when we plant."

DENICOTINIZED TOBACCO

It is only natural that after dealcoholized beer and decaffinated coffee that, sooner or later some one would place on the market a so-called denicotinized tobacco. It is the general belief that nicotine is the only harmful element in tobacco. Ammonia gas, pyridine derivatives and carbon monoxide are other elements that the smoker consumes. It has been scientifically established, that the drier the smoking tobacco, whether used in the form of cigars, pipe or cigarettes, the greater is the destruction of the nicotine. Dr. W. E. Dixon of the Pharmacological Labor-

atory of Cambridge, has expressed the opinion that the water content of the tobacco may be a more harmful factor than the original nicotine content.

The introduction of denicotinized cigarettes, cigars and pipe tobacco has just begun to arouse the interest of the public. Bulletin 295 of the Connecticut Agricultural Experiment Station, New Haven, Conn., contains a report on alleged denicotinized tobacco. The report is concerned with the work done by Dr. E. M. Bailey, the chemist in charge.

The fact is brought out that to the average mind "denicotinized" means practically free from nicotine. This suggests at once that these products are essentially misbranded. It was the findings of the Connecticut chemists that these alleged denicotinized products contain but little less nicotine than to the corresponding leaf type tobaccos. They also reported that it was quite easy to find among ordinary brands a tobacco that was but little higher in nicotine content.

To serve as a means of comparison they analyzed a number of the popular brands of cigars, cigarettes and smoking tobaccos. Having analyzed these, they analyzed a number of the processed or denicotinized brands. They found that ordinary tobacco has an average nicotine percentage of 1.77. Their analyses of the denicotinized brands showed that they contained an average nicotine percentage of 1.28. To make it short the denicotinized brands showed an average of only 30 per cent less nicotine than the ordinary, popular brands.

ACIDOPHILUS MILK AND ITS PREPARATION

It has become known, just during recent years, that the presence and regulation of bacteria in the intestines is of much importance. There are certain types of Bacilli which, if they become predominant, produce putrefaction, diarrhea, constipation or intestinal toxemia. And now we have learned that the *Bacillus Acidophilus* is the all important micro-organism which checks their action. It is a constant war between two armies of bacteria and as long as the lactic-acid-producing organism is the predominant one in the intestinal flora, a proper action of the intestines is favored and general health promoted.

The most effective medium for implanting

Bacillus Acidophilus in the intestines is milk. To have therapeutic value there must be a great number of these bacilli; the high carbohydrate content of milk facilitates their production. Milk, inoculated with *Bacillus Acidophilus* is quite expensive when bought already prepared. Moreover, to be of therapeutic value it must be freshly made. A simple and inexpensive process has been approved, whereby a person may prepare it at home.

To begin with, the finished product must be pure and entirely free from foreign substances. Therefore, the thermos bottle to be used should be thoroughly cleansed and scalded, as should likewise the cork, thermometer and whatever else comes into contact with the ingredients. Unsweetened evaporated milk is the best to use since it is certainly sterile and since its slight caramelization favors the growth of the *Bacillus Acidophilus*. The pure broth culture can be bought at, or through, any drug store.

The milk is poured into a pan, previously scalded. The empty can is then filled with boiling water and this added to the milk, thus restoring the consistency of ordinary cow's milk. Two or three ounces of the pure broth culture is added and the mixture stirred well. With the temperature about 105 F., it is transferred to the thermos bottle, corked and allowed to stand for twenty-four hours, the thermos bottle keeping the temperature nearly constant at that high point. Now it is poured into a clean bottle and placed in a refrigerator, thus checking the action.

From this milk may be made succeeding cultures, using six ounces of the previously made milk culture to a can of milk. From thirteen to seventeen hours is all that is required to complete the action after the first time, since a longer period will allow too much acidity, resulting in an unpleasant sour taste.

Bacillus bulgaricus is sometimes sold, either dishonestly or unconsciously, in place of *Bacillus Acidophilus*. This can be easily detected since the *bulgaricus* variety rapidly becomes unpleasantly sour or bitter, likewise becomes very viscous and when poured, is very stringy. Typical *Acidophilus* Milk has a finer-grained curd and never becomes stringy. *Acidophilus* Milk is being used largely for infant feeding and gastro-intestinal disturbances in children. As such, it

is rapidly gaining in favor, even though it is in its infancy concerning its scientific basis.

RESIDUUM

The man who has a knack for acquiring facts and then making good use of them is such an exceptional individual that he often becomes somewhat conspicuous. If you look about at the big successful men you know, . . . you will find that most of them can make a quick turnover on such information as they possess. They can take one little fact and make it go a long way. It often happens that the man with the most education is so busily engaged in the mere living up to his learning that he has little time to put it to any use.—Fred C. Kelley in "The Wisdom of Laziness."

* * *

There are two ways of making yourself stand out from the crowd. One is by having a job so big that you can go home before the bell rings if you want to. The other is by finding so much to do that you must stay after the others have gone. The one who enjoys the former once took advantage of the latter.—Henry Ford.

* * *

Theory may raise a man's hopes, but practice raises his wages.—The Sphinx.

* * *

Is it not true that life is one continual grind after all? Once one's business seems to be progressing quite successfully and life in general is going along quite smoothly, all of a sudden we hit a snag. Just how do we react to the hard blows imposed up us by the rushing business world?

Walter Camp, the famous athletic director, has likened the life of a business man to that of an athlete. The first and greatest lesson that a good football player has to learn is that of being able to take hard knocks without resentment. After all, according to Mr. Camp, the coaching of a star football player boils down to this:

"You've got to get off faster."

"You've got to hold that line firmer."

A good football player never reaches the point where the coach is ready to admit that he is a perfect player. At least a wise coach never admits it audibly. The business man is his own coach.

Culture is that which remains with a man when he has forgotten all he learned.—Edouard Herriot.

THE MANUFACTURE OF PLATINUM WARE

The commercial distribution of platinum may be divided into two categories—essential and non-essential. The latter, the jewelry trade, continues to take much the greater amount of platinum. The amount of platinum entering the jewelry trade materially influences the price which restricts its use for technical and industrial applications. 75% of the platinum used during 1925 went into jewelry. Next to the jewelry field, the electrical trade consumes the most. In 1925 this amount was 14% of the total. In chemical equipment, the amount of platinum used was a little less than 8%, including that utilized in sulphuric acid contact mass.

Late in the eighteenth century manufacturing platinum was crude and difficult for at that time it was not possible to melt the metal. Chabaneau was probably the first to be really successful in the art. His procedure was to heat platinum sponge to a white heat and press it in an iron mould. This changed the metal from platinum sponge into the solid metal.

There was no great change in the method of manufacture of platinum apparatus until Dr. Robert Hare and his associate, Joaquim Bishop, developed the oxy-hydrogen torch with which platinum was first successfully melted. It was a revolutionary method of melting and opened the way to wider commercial manufacture. This way of melting is still used today although subsequent steps in manufacturing practice have been greatly facilitated by improvements in machinery and by a better knowledge of the metallurgy of platinum.

In the earlier days of the manufacture of platinum apparatus, exact composition was neither thought necessary nor was it obtained. Little effort was expended to make platinum of a standard composition. Often platinum contained as high as 6% or 8% iridium. Iron and either silica or calcium were present in considerable quantities. Loss of weight was not considered so serious a defect in the platinum ware itself. In later years it was more definitely established that a standard composition was desirable and definite efforts to that end were made. In 1915 the Bureau of Standards clearly showed the wide dissimilarity of composition of platinum ware from different manu-

facturers. There was even considerable difference in composition in apparatus produced by the same manufacturer. The objective of several years reached in platinum apparatus was to determine the composition that would be most satisfactory. In the Bureau's report it was concluded that iridium occurred as the principal "impurity." Silica and calcium were also determined as being present in nearly all the ware examined. Rhodium instead of iridium was found in a few pieces but above everything else it was clearly indicated that the variety and quality of impurities was most marked.

A method of manufacture enabling them to produce platinum of as nearly uniform composition as possible was adopted twenty years ago. Since then, however, many changes and refinements have been made.

Briefly stated, the method consists of specially refining platinum to nearly chemical purity. It starts with dissolving impure platinum in aqua regia, acidulating with hydrochloric acid, precipitating with ammonium chloride, filtering and washing the precipitate, reducing the precipitate to sponge and melting. Into the purified platinum a definitely known quantity of iridium is introduced so that the finished apparatus contains .4 to .45% by weight of iridium. The process of refining is more fully explained in another section on the separation of the platinum metals. The reason for the definite control of iridium is to give the finished apparatus a uniform degree of hardness. Iridium in itself is more resistant to chemical attack than platinum and melts at a much higher temperature.

After refining and converting the salt into sponge, the next step is melting. This is accomplished by the oxy-hydrogen torch in a suitable refractory. Casting at the proper temperature to obtain the desired physical structure is a step of great importance. No little skill and experience are required to obtain homogenous ingots.

The metal is then given careful heat treatment. From the ingots, the metal is rolled into sheets or drawn into wire. During these processes the metal is annealed at definite stages and for exact periods of time. The annealing temperature has a marked influence on the physical structure of the metal and consequently upon the homogeneity of
(Continued on Next Page Col. 2)

NOTES ON THE CARE AND USE OF PLATINUM

To insure the longest and most satisfactory service from Platinum ware, the following suggestions should be carefully observed:

First. See that Platinum Ware is clean and bright before each operation in which it is employed. To that end it is advisable to clean, dry and polish it immediately after it is used. The cleaning may be accomplished by boiling in dilute hydrochloric acid or by immersing in fused potassium bisulphate for a few minutes and removing the salt by means of boiling water.

By rubbing the surfaces with moist talc or fine sea sand (free from sharp or angular grains) the Platinum may be freed from adhering substances and polished without injury or appreciable loss of metal.

After polishing, the Platinum should be thoroughly rinsed in distilled water and finally ignited.

Second. In making ignitions or fusions in Platinum vessels by means of the Bunsen burner, the upper non-luminous cone only should be employed and not the inner cone, nor should a smoky flame be used, as the action of a flame containing free carbon will result in the formation of a carbide of Platinum causing the metal to become brittle.

Third. Do not heat unknown substances in Platinum.

Fourth. The alkaline earths, caustic alkalies, nitrates, nitrites, cyanides and particularly lithium and barium oxides and mercury compounds attack Platinum at high temperatures. Fusions of any of these compounds should not be made in Platinum crucibles.

Fifth. Silicon, which may be formed by the reduction of silica, renders Platinum quite brittle.

Sixth. Great care should be observed in igniting phosphates in Platinum crucibles as the presence of reducing substances, such as the charcoal of the burnt filters, may cause the reduction of small quantities of phosphorus, which, combining with the Platinum, renders it quite brittle.

Seventh. Do not place hot Platinum in contact with other metals nor do not heat Platinum crucibles or dishes in contact with iron or metals other than Platinum. Platinum, pipe clay, chrome-nickel alloys or

quartz triangles only should be used.

Eighth. Compounds of silver, lead, tin, bismuth, arsenic and antimony should not be ignited in Platinum vessels, as the reduction of metals having low melting points may result in the formation of alloys with the Platinum.

Ninth. Evaporation and fusions in which chlorine, iodine or bromine are set free should not be performed in vessels of Platinum.

Tenth. Be sure that your Platinum Ware is of reputable manufacture.

J. Bishop and Company.

THE MANUFACTURE OF PLATINUM-WARE

(Continued)

the finished piece, whether it be in the form of apparatus or in the form of wire.

Definite control of annealing temperatures is not applied to platinum alone but also to alloys of platinum and other metals of the platinum group, platinum-gold alloys, silver-gold alloys, etc.

Overheating of platinum or underheating or overheating of alloys becomes apparent in the mechanical working of the metals.

Platinum-iridium alloys, platinum-gold alloys, palladium-gold alloys in varying proportions all have different temperature ranges where best annealing results will be obtained.

The annealing temperatures of the alloys are all higher than the satisfactory annealing temperature for platinum.

When the sheets have been rolled to the desired thickness they are cut into discs, squares or rectangles, and hand-hammered into the form required. The reason for hand-hammering is to make the surface of the metal more dense, and in crucibles, to thicken the corners where a greater thickness of metal is desirable.

Platinum ware that is made by spinning does not have satisfactory strength, because its physical structure has been impaired. Spinning stretches the metal and opens the grain structure. Density is sacrificed to cheap manufacture. Spinning gives an article a fine surface, as apparent to the naked eye, but the microscope reveals the formation of minute surface cracks and scales which aid disintegration.

Crucibles or dishes having a dense surface
(Continued on Page 23)

QUESTIONS AND ANSWERS ABOUT VITAMINS

What are vitamins?

"Minute quantities of substances which are to the human machine what the ignition spark is to the automobile". We know what they do, but we do not know exactly how they do it.

What do vitamins do?

Under ordinary conditions they promote body growth, maintain body tone and vigor, protect the body against infection, affect successful reproduction, possibly increase length of life, assist the body to function properly and get the full benefit of other food constituents.

Will vitamins insure health?

Not necessarily. We recognize that while the selection of proper food has a profound effect under average and ordinary conditions we should bear in mind that not all illness is of dietary origin and hence cannot be expected to succumb to food.

What foods are richest in vitamins?

Dairy products, cod liver oil, vegetables, especially leafy vegetables and fruits, glandular organs such as liver.

What foods are poorest in vitamins?

Cereals, deprived of their outer covering (white flour, white rice), muscle tissues of ordinary meats and sweets.

Why is it unnecessary to seek vitamins in artificially prepared forms?

Because vitamins are most economically available through the proper selection of natural foods.

Does cooking impair vitamins?

It may. Vegetable should be cooked as quickly as possible with the least loss of juices. Cooking with alkali (soda) injures some vitamins.

Are vitamins lost when juices cook out of vegetables?

Yes. Vegetable juices should no more be thrown away than the juices which cook out of meats or fruits. No more water should be used in cooking vegetables than is necessary to prevent sticking.

How can we be sure of getting enough of such vitamins as may be destroyed or injured by heat?

Eat regularly some fresh fruits and vegetables. Salads frequently furnish this. The juice of raw cabbage and raw grated carrots will help to protect young children over a long period such as the winter months.

Do vitamins have any influence on the formation of bones and teeth?

Yes. Only when sufficient of A and D are present does the body seem to be able to make use of the material of which bones and teeth are made.

Does the body store vitamins?

Not to any great extent, except that the liver, the lungs and other internal organs appear to be especially adapted to the storage of some vitamins. We must depend on a continual supply of them in food.

Do we make our own vitamins?

It is more than likely that they are only transferred from foods.

SHOULD BUSINESS MEN MAKE SPEECHES?

Some business men make speeches. Others don't. Whatever question there may or may not be about the worthwhileness of making speeches, there cannot be any question as to the worthwhileness of making a speech a good one if one is made at all. Says Herbert N. Casson, the noted British exponent of efficiency: Always and everywhere, the man who can speak well is the man who has power. Was this not shown when Rosslyn Mitchell defeated the New Prayer Book by a half-hour's speech—one of the ablest that has been delivered in the House of Commons for years? His speech was irresistible. It had argument, pathos and dramatic force. No one in opposition could answer it. If only our business men would study the art of public speaking and not bore their hearers to death, as most of them do, it would be a great help in the promotion of prosperity. No wonder that business is regarded as a dull and uninteresting subject. There is a public hall in the United States that has the following sign, in large letters, on the wall: "The population of this country is 120,000,121. Only the odd 121 can make a decent speech. None of them lives in this town." Shorter and better speeches—that is what every audience wants.

For my part, I have heard more good speeches by able business men than by professional talkers and other theorists. In my judgment, capable business men leave too much of the public speaking to others. This is one reason why business and business men are not better understood.—Forbes.

ACTIVITIES

KAPPA EPSILON SORORITY



EMMA K. PEJSA
President

The Phi Kappa Omicron Sorority became Eta chapter of Kappa Epsilon, a national pharmaceutical sorority, November 30, 1928. Miss Naomi Kenefick, the grand president, and Miss Mary E. Hunt, the grand treasurer, performed the ceremony which was held at the home of Mrs. Edward Spease. The sorority has the distinction of being the only national sorority on the campus. Kappa Epsilon formerly limited its chapters to State Universities—Alpha at Minnesota, Beta at Iowa, Gamma at Nebraska, Delta at Montana, Epsilon at Ohio and Zeta at Wisconsin. The sorority aims to cooperate with college authorities in maintaining high scholastic standards and to create a spirit of cooperation among the students.

Miss Emma Pejsa was elected as the first president, Miss Mildred Pirson as secretary and Miss Ruth Pirson as treasurer. Shortly after the installation of officers, Miss Marie Hoefer and Miss Bertha Grosser were initiated as pledges.

With the consent of the Grand Chapter, the sorority was given the privilege of initiating the alumnae of Phi Kappa Omicron as alumnae members of Kappa Epsilon at the initiation on January 3; ten members were taken in.

The social program for the coming semester has not as yet been definitely planned but the pledge initiation and spring Formal are to be two of the main events of the year.

ALPHA ALPHA



PHI DELTA CHI

Nearly all of the brothers of Alpha Alpha spent the Christmas holidays with their parents, but a few of us had to be content with one day at home and then return to our labors. Brothers Baldinger, Kessler, Shane, Koch and Kumpf spent most of the time in the big city, either working or sleeping—quite a bit of both. All had an enjoyable vacation, but were glad to get back to school and prepare for the final examinations.

The last three weeks of December found Alpha Alpha's chapter house converted into a hospital annex. Several of the boys that were not ill before Christmas spent a few days of their vacation in bed. Those at the house that were attacked by the "flu" were Brothers Baldinger, Gayok, Steidl, and pledges Miller, Pumphrey, and Baldwin. Several of the local boys were also confined to their homes.

Alpha Alpha held the regular semi-annual election of officers at the meeting of the active chapter, on Monday evening, January 7, 1929. These new officers will take their stations immediately, and we are looking forward to a successful semester with their able guidance. The following were elected:

Earl T. Cook, President
Paul Steidl, Vice-President
Micheal Gayok, Secretary
Robert Kumpf, Treasurer
Carl Shane, Steward and House Manager
Adelbert Patronskey, W. P.
Al. E. Kuchta, W. I. G.
Henry Gallagher, W. M. A.

These officers will succeed respectively, Brothers Baldinger, Kumpf, Cantlon, Cook, Patronskey, Lyman, Schroeder and Kuchta.

* * *

The twenty-ninth annual Grand Council of the Phi Delta Chi Fraternity will be held at the Brown Hotel, at Louisville, Ky., on Thursday, Friday and Saturday of February 14, 15 and 16. Brother Donald Kessler has been chosen to act as delegate from Alpha Alpha chapter, with Brother Earl Cook as alternate.

Alpha Alpha held an informal Christmas dance in the Tally-ho room of Hotel Winton, on Friday evening, December 21, 1928. This was a good send-off for the boys who were to depart the following day to spend the holidays at home. About twenty-five couple danced to the rhythmical strains of Al Carrol's Syncopators, and had a very enjoyable evening. The chaperons present were Dr. and Mrs. Bacon, Mr. and Mrs. Hosler and Dr. and Mrs. Hovorka. The programs were printed in bright colors and were the shape of a tally. Punch was served during the evening. Favors in the form of a bar pin with the raised letters of the fraternity were presented to the ladies. We are sorry that more of the actives and pledges could not be present on account of sickness and work. The dance was arranged for by a committee composed of Brothers Koch, Kumpf, Kuchta, Cantlon and Cook.

Brothers Kuchta and Kumpf and Misses Polgar and Hanlon were unable to attend the Christmas dance, due to the fact that they met with an auto accident on the way. They arrived at the dance, via street car, just in time to hear the familiar strains of "Home, Sweet Home".

Brother Bruehler surprised the boys somewhat by giving us the first 1928-1929 edition of the "Alfalfa", our chapter's official organ. It certainly was a dandy issue, and the editor deserves much credit for the work he has put into the publication of this booklet. The present editor has introduced something new in connection with the "Alfalfa" in that he has incorporated several appropriate cartoons into its pages. Bruehler is assisted this year by Brother Ischie, alumni editor, Brother Schroeder, associate editor, and Pledge Lautenschlager, pledge editor.

OUR ALUMNI WHO ARE PRACTICING MEDICINE

We should be glad to hear from various members of our alumni who are medical practitioners. We are in receipt of a letter of encouragement from Dr. W. W. Dangelesen '13. Let us hear from you and we shall be glad to print your card as we shall reserve this column for such recognition. We might ask in passing, has your pharmaceutical education been of any great help to you in your practice of medicine?

W. W. Dangelesen, M. D.
Pasadena Medical Bldg.
9400 Euclid Ave.
Cleveland, Ohio
Nervous and Mental Diseases

ANNOUNCEMENT

The annual dance of the School of Pharmacy will be held in the Georgian Room of Hotel Cleveland. The dance will be informal. The date is Monday, February fourth, and the time 9:00 P. M. We cordially invite all the alumni to join us, and urge the students to make it the first 100% turnout. The committee has completed arrangements for the affair, and promises the best time ever.

The Committee.

THE MANUFACTURE OF PLATINUM-WARE

(Concluded)

face are less likely to be attacked either by the gas flame or by chemical action, although no platinum ware, no matter how well it is made, will resist abuse.

Often when platinum ware has been thought defective in composition or mechanical finish, in reality it was not due to the supposed defects. The reduction of substances yielding free metals; the absorption of silica, iron or other impurities; the improper use of the gas flame or the absorption of some injurious illuminates into the metal was the cause of failure. These are the common causes for rapid deterioration of platinum ware.

KAPPA PSI BETA BETA CHAPTER



**Western Reserve University
Cleveland, Ohio.**

1619 East 117th Street

KAPPA PSI NEWS

We wish to thank the alumni for the many greeting cards that we received during the holidays.

The annual February initiation for pledges of Beta Beta chapter will be held on February 22 (Washington's Birthday). A grand get-together of all the alumni is being planned. A feed, smoker and card games will enliven the early part of the evening. A big turn-out is expected for this annual event.

The second house party of the semester was held December fourteenth, and it proved to be a real success. Some of the brothers, the previous evening, ventured into the country and obtained a Christmas tree. This and other Christmas-tide decorations adorned the house for the evening. Punch was served and widely approved. Pete Nesi and his gang harmonized better than ever. A good crowd was in attendance and those absent certainly missed an enjoyable evening.

Three pledges became activated into the workings of the fraternity on the twenty-sixth of October. The boys that braved the dark way were Wilbur Smith, Wilbur Grimm and Otto Wolfert. Wilbur Smith came to us a year ago from Ohio State. Brother Grimm transferred to pharmacy school this fall, having had previous college work for two years at Wooster and a year at Adelbert College. These two boys with the long-pledged Wolfert looked like a real Grecian trio.

KAPPA PSI PERSONALS

"Milt" Bryant '22, is now working in a drug store in Kent, Ohio.

Harold Burke '22, is now sales manager for the Remington Rand Company here in the city.

Brother Karl Driggs of Gamma chapter, formerly with the Mulford Company, has recently been employed by the Richard Hudnut Company.

Frank Heba '22, is now detail man for the Metz and Winthrop Laboratories.

Hayes Heter '27, is now in the insurance business in Toledo and vicinity. He is still residing in Clyde, Ohio.

Bob Hills '24, is now working in a drug store in Chardon, Ohio.

Lawrence Jordan '24, is proprietor of a successful business at 11717 Euclid Avenue. The company—The Lakeside Pharmacal Company—specializes in physicians' supplies.

Wade Wetzel '20 is now living at the house.

Bill Willoughby '26, has recently entered the employment of the Charles F. Streich Pharmacy.

Bill Bassett '26, is now attending Baldwin Wallace College at Berea with the hopes of becoming an instructor in physical education.

Brother Joseph Nagy is now working at the National Carbon Company in Lakewood.

Paul Merriman '23, is now living on a ranch fifteen miles from Tucson, Arizona (the nearest town). Paul writes us that it is six miles to his nearest neighbor. He assures us that life on the sunny Mexican border is the ideal one. His address is Box 2392 Tucson, Arizona.

Did you know—

That there are seventy women negro doctors in the United States?

Did you know—

That the external application which we call plaster was undoubtedly used by the primitive man in the shape of a leaf taken from the plant and applied directly. This was no doubt the beginning of external medication.

THE DRUG CLERK

The drug clerk stands behind the counter
Young and dapper and debonair—

Before him burn the great unwinking lights,
The hectic stars of city nights,
Red as hell's pits, green as mermaid's hair.
A queer half acrid smell is in the air.
Behind him on the shelves in ordered rows
With strange abbreviated names
Dwell half the facts of life. That young
man knows

Bottled and boxed and powdered there,
Dumb tragedies, deceptions, secret shames,
And comedy and fear.

Sleep slumbers here, like a great quiet sea
Shrunk to this bottle's compass: sleep that
brings

Sweet respite from the teeth of pain
To those poor tossing things
That the white nurses watch so thought-
fully.

And here again
Dwell the shy souls of maytime flowers
That shall make sweeter still those poignant
hours

When wide-eyed youth looks on the face of
love.

And, for those others who have found too
late

The bitter fruits thereof,
Here are cosmetics, powders, paints—the
arts

That haunted women use to hunt again
With scented flesh for bait.
And here is comfort for the hearts of
sucking

Babes in their first teething pain.
Here dwells the substance of huge fervid
dreams,

Fantastic, many-colored, shot with gleams
Of ecstasy and madness, that shall come
To some pale twitching sleeper in a bunk.
And here is courage cheaply bought
To cure a blue sick funk,
And dearly paid for in the final sum.
Here in this powdered fly is caught
Desire more ravishing than Tarquins—

And at last

When the one weary hope is past
Here is the sole escape,
The little postern in the house of breath
Where pallid fugitives keep tryst with
death.

HIDE 'EM, PAINESVILLE!



All this the drug clerk knows and there he
stands,
Young and dapper and debonair.

Eunice Tietjens.

Romance

"Why are those men putting their heads
together in a circle?" asks a lovely girl of
her escort at the big game. "What do you
call that Bob?"

"That's a huddle," responded the hand-
some youth with a coonskin coat, clear eyes,
a straight chin and a pennant.

"Oh silly, you can't fool me; they're in a
conference."

* * *

"Where is my husband?" snapped the fat
woman.

"Sorry, he left orders not to be disturbed."

"Well call him out. Where's his stenog-
rapher?"

"She went into his office half an hour
ago."

"What are they doing?"

"They're in a conference."

"Young man, you can't fool me; they're
in a huddle."

EXPRESSED OIL

Some people are so tender-hearted that they'll pin a stamp to a letter so they won't have to lick it to make it go.

* * *

Diet Lecture—'How I managed to live on scraps for ten years.'—Jack Dempsey.

* * *

Confessions of a radio soprano—How I murdered Ramona on six successive nights.

* * *

Fashion chat—The way to keep white flannel trousers clean is to dye them black.

* * *

Absolutely to Blame

Auto tourist: "I clearly had the right of way when this man ran into me, and yet you say I was to blame."

Local cop: "You certainly was."

Autoist: "Why?"

Local cop: "Because his father is mayor, his brother is chief of police and I go with his sister."

* * *

This telegram was received by the bride of a civil engineer who took only winter flannels to the tropics with him.

"S.O.S.B.V.D.C.O.D.P.D.Q."

—Fyr-Fighter.

* * *

"If you kiss me, I'll slap you."

"I like to be slapped."

"I like better to have to keep my word."

"Keep it; it's back slap I want, not back talk."

* * *

The old maid: Has the canary had its bath yet?

The maid: Yes, ma'am; you can come in now.

* * *

Prof: I wish you'd pay a little attention to what I say.

Stude: I am, as little as possible.

* * *

Him: Do you ever gamble?

He: I've been married three times.

* * *

What's the Difference?

Jack: What's the difference between a banana and a Jew?

Jake: Spring it.

Jack: You can skin a banana.

P erfumery —The fragrant odor of a myrrh maid.

H ealth —Something mercenary people pretend they're thankful for when, in reality, they'd gladly become bed-ridden for the sake of a Million.

A ppetite —A transitory, salivary excitation of the oral cavity, resulting from the empirical acumen of the sensorium, which, stimulating humectation of the labial, palatal and lingual ganglia, simultaneously superinduces an acute sense of exaggerated vacuity in the peritoneum, where-upon the larynx, pharynx and esophagus, yammering for food, drink or chewing-gum, immediately apprise their owner of hunger, thirst or maxillary desuetude, the object being to secure work for the metabolic processes, nourishment for the cellular edifice and a living wage for Butchers, Soda-jerkers, caterers and restaurateurs.

R ibs —Slats that are ticklish covering organs that are sound.

M iser —A m i s g u i d e d accumulator who feeds his purse on astringents when it really needs a laxative.

A ffinity —In science, "a chemical attraction between two bodies." In real life, ditto. EX-AMPLE: the chemical attraction between a man's money and a peroxide halo often produces an Affinity.

C ash —Cream de mint.

Y uletide —High tide in the stocking, low tide in the purse.

* * *

Who Wins?

He: You know, you flappers are just like cigars, you're always going out.

She: Oh you men, you think you're big collar and cuff men from Lyon, N. Y. but we flappers take the starch right out of you.

Favorite Lyrics

A girl who weighs many an ounce,
Used language I will not pronounce;
Her brother one day
Pulled her chair right away;
He wanted to see if she'd bounce.

There was an old maid of Thrace
Whose nose spread all over her face.
She had very few kisses,
The reason for this is
There wasn't a suitable place.

* * *

Those Scotchmen

A Scotchman, wanting to purchase an empty bottle, went into a drug store. He picked out one and asked its cost.

"It'll cost you a cent empty but you can have it for nothing if you have anything put into it," said the clerk.

"Put a cork in it then," said the Scotchman.

* * *

Cold Cream?

Mother: "Mabel, did you go down to the drug store for the Cold Cream?"

Mabel: "Yeth, ma'am."

Mother: "Well, where is it?"

Mabel: "I ate it, of course."

Mother: "Ate it? Why, child, what kind did you get?"

Mabel: "Chocolate ice cream; it was the coldest kind I could get."

* * *

A Guaranteed Hair Restorer

A man dropped his wig on the street and a boy picked it up and handed it to him.

"Thanks, my boy", he said. "You are the first genuine hair restorer I have ever seen."

* * *

A Headache Cure

A man went into a druggist's shop and asked for something to cure a headache. The druggist held a bottle of hartshorn to his nose and the man was nearly overpowered by its pungency.

As soon as he recovered he began to rail at the druggist and threatened to punch his head.

"But didn't it ease your headache?" asked the druggist.

"Ease my headache," gasped the man, "I haven't got any headache. It's my wife that's got the headache."

Notes in a Drug Store

"This is my little girl. I send you 5¢ to buy two poders, for a groan-up adult is sike."

"Dear dochter, please gif bearer 10¢ worth of Antu-Toxyn for to gargle a baby's throat and oblige."

"You will please give the little boy 15¢ worth of epecac for to throw up in a five-months old babe. N. B.—The babe has a sore stummik."

"I have a cute pain in my child's diaram, please give my little son something to release it."

"My little baby has eat up its father's parish plaster. Send an anecdote quick as possible by the enclosed girl."

* * *

Oh Those Clerks!

A man, in a hurry, entered a drug store and asked for three dozen quinine pills.

"Shall I put them in a box, sir?"

"Oh no," said the man, "I'm going to roll them home."

* * *

Relabel

Doc. Thompson: "The man who got up the label for this bottle of 'Cure for Chills' must have a strong sense of humor."

Druggist: "Why?"

Doc: "It reads 'Shake well before using'."

* * *

A Scene in a Modern Drug Store Restaurant

Customer: "Give me a couple of frankfurters."

Clerk: (calling to kitchen) "Two Coney Island bloodhounds."

Customer: "I've changed my mind about that order."

Clerk: "Chain up the pups."

Customer: "Give me an oyster stew."

Clerk: "One rummy."

Customer: "Bring me a piece of angel cake."

Clerk: "One foot in the grave."

* * *

An Unsuccessful Attempt

"What is Brown doing now?"

"He opened a drug store."

"Successfully?"

"Naw, he was caught."



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April, 1929

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A Publication Dedicated to Professional Pharmacy

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RESERVATIONS

For your convenience we are printing the following blank, in order that those of the alumni who so desire may make reservations for the Parke Davis Trip on May 9 and 10.

We also urge you to make your reservation for the Alumni Banquet. This will be of great aid to the committee.

Please make.....reservations for the Parke Davis Trip, May 9 and 10.

Boat Fare—Round Trip\$5.00
State Rooms—outer 4.00
 inner..... 3.50

Name
Address
Boat leaves Ninth Street Pier at
11:30 P. M.; Arrives Detroit at
7:00 A. M.

Enclosed find check for.....

Please reserve.....plates for the Alumni Banquet of Western Reserve University School of Pharmacy—at the Acacia Country Club, Wednesday evening, June 12 at 6:45 P. M.
\$3.00 per plate.

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

VITAMINS

By Robert M. Porter '29

Vitamin research has advanced along various lines with great rapidity, yet with a greater uncertainty. For instance, forty years ago the etiology of beriberi was discovered as being due to a lack of vitamin B.

In 1913, McCollum, Osborne and Mendell, working independently of each other, accumulated experimental data proving the existence of a second vitamin which was found in certain fats. This they called vitamin A.

While working with vitamin B Seidell discovered that another substance was present and separated this substance from vitamin B by absorbing the vitamin B in fuller's earth, the other substance still being present in the filtrate. This substance was called vitamin C.

Still later while experimenting with the vitamin content of yeast various investigators became convinced that a substance other than vitamin C was present in the yeast culture. This was later proved and the substance called vitamin D.

Following the discovery of these vitamins came the recent discoveries of two more substances which have been called vitamin E and PP factor.

The chemical nature or formula has not as yet been worked out for any of the vitamins. All of them have been shown to be nitrogen containing. The fact that they contain nitrogen helps to place them in the amino acid group. The fact that a very minute quantity of these substances produce a very marked pharmacologic or therapeutic effect gives ground for the belief that they may be of an alkaloidal nature. We do know to a certain extent, certain general properties of these substances. For instance, we definitely know that vitamin A is fat soluble and is gradually decreased in activity upon exposure to air, due perhaps to oxidation and is also affected by high heat but will withstand ordinary cooking temperatures.

We also know that vitamin B is water soluble and is not affected by ordinary cook-

ing and drying but is affected by high heat. It is readily destroyed by the addition of soda to the water when cooking.

Vitamin C is very readily destroyed at a cooking temperature except in the presence of acids. It is also water soluble.

Vitamin D is both water and fat soluble and can withstand very high temperatures, as high as 250° Centigrade. A peculiar analogy is observed between this vitamin and ultra violet light which will be explained later.

Vitamin E is little affected by heat and is soluble in oil in certain gland organs of the body and plants.

PP factor is a water soluble substance occurring along with vitamin B.

The experimental data concerning vitamins fills volumes and gives very little conclusive data. As Pharmacists we are more vitally concerned with the source of supply, the diseases for which there are cures and the standardization of the therapeutic products marketed.

Vitamin A is often called the anti-ophthalmic vitamin because of its specificity in curing an eye disease—xerophthalmia. Xerophthalmia is a conjunctival infection being noticed by an excessive inflammation of the eyelids. The disease leads to blindness if neglected. Vitamin A is also synergistic with other forces in the promotion of growth.

The chief sources of vitamin A are: cod liver oil, butter, cream, milk, egg yolk, spinach and other similar foodstuffs.

So far the investigators of the various vitamins have failed to formulate any conclusive tests for these substances other than clinical testing. For many years it has been noticed that the oil of various fish affected a cure for this disease. In order to identify a product as containing this substance, which has come to be known as vitamin A, it is necessary to produce a clinical case of xerophthalmia by feeding a diet devoid of any vitamin A.

Young Albino rats are taken, as they appear to be the most adaptable to experiments. Very young rats are taken as a loss of rapidity in growth may also be noticed. After a course of eight to twelve weeks the growth rate becomes slower and may cease entirely; the coat of hair becomes moist and scrawny, oftentimes diarrhoea occurs. Soon the eyes become sensitive to the light, and weakness is shown by a tendency to squint and by an excess of tears; following this an edema sets in around the eyes. The conjunction then becomes involved and as time goes on an apparent secondary infection sets in and is manifested by pus formation and a protruding of the eye and even a rupturing of the eyeball is not uncommon. These symptoms are analogous to those prevalent in humans afflicted in the same manner and definitely indicate a lack of this vitamin. While in this state the rat is very susceptible to respiratory infection and infections of the various passageways such as the bronchi, and cynosures. This is chiefly due to lowered resistance, due in turn to lack of this particular vitamin. As soon as the lacking vitamin A is added to the diet recovery is begun and continues until complete, provided, of course, the disease has not progressed to a too chronic condition.

Until quite recently it was generally thought that vitamin A was also a specific for rickets. Cod liver oil has been used for the cure of rickets for years and inasmuch as it was the chief source of vitamin A, little thought was given to the possibility that the antirachitic action might be due to the presence of another vitamin. Many attempts were made to prepare concentrates of cod liver oil and incorporate it into tablet form.

Another attempt was to solidify the oil by hydrogenation and in this manner produce a more stable product—not susceptible to oxidation. The oil was successfully hydrogenated at 250° Centigrade for four to six hours. However the hardened oil upon clinical testing did not prove specific for ophthalmic diseases, but did prove quite beneficial in the cure of clinical rickets. This suggested the presence of another vitamin in the oil which was specific for rickets. We know that the high temperature of 250° Centigrade used in the processing of the oil destroyed the vitamin A, but did not affect the other vitamin present.

Later, however, a process of hydrogenation

at a lower temperature was worked out whereby both vitamins were preserved. The value of the process can well be seen as it gave a clue to the discovery of what is now known as vitamin D. These hydrogenation experiments took place in 1922 and 1923.

In 1921, Funk and Dubin published a work on the vitamin requirements for certain yeast and bacteria. They had previously discovered that vitamin B was present in yeast and that clinical cases of beriberi, developed in pigeons, could be cured by administering a vitamin extract of yeast.

The workers Emmet and Stockholm suggested that the growth of yeast itself was not due to the beriberi vitamin as had been substantiated by Ide and his co-workers and on this suggestion Funk and Dubin attempted to separate the two active vitamin-like substances. Their work was done on yeast cultures and cultures of streptococci. They found that by the addition of fuller's earth to a solution of yeast and subsequent filtering, a filtrate could be obtained that would greatly activate the growth of a yeast culture and also that of streptococci. However, this filtrate would not stimulate the growth of streptococci to as great an extent as the original solution. The extract precipitated out with fuller's earth did not prove to be of any value in the treatment of disease where vitamin B was indicated. When this precipitate was treated with acetic acid and the filtrate given to young Albino rats it seemed to increase the growth of rats. On further experimentation the concentrated filtrate was given to rats which had developed clinical rickets and proved to be curative in quite small doses. On this ground Funk and Dubin concluded that another substance than vitamin B was necessary for the growth of micro-organisms and that it must be of a vitamin nature. The response of rachitic rats to this extracted substance substantiated their assumption and the vitamin was provisionally called vitamin D. This vitamin was identified as being the same as that substance obtained upon hydrogenation of cod liver oil at a high heat.

Rickets is a disease restricted in a great measure to the northern hemisphere, especially the temperate zone. It is a disease restricted to children and the underlying principle is the inability of the young to calcify. Accompanying symptoms of rickets consist of: flabby muscles, restless sleep, ner-

vousness, irritability, loose and lax ligaments, continual rolling of the child's head, back and forth across the pillow and more or less marked secondary anemia. Teeth are late in making their appearance and decay early. Rachitic children also sit, stand, and walk at a much later period than normal children.

The bones of the body are most widely affected. The bones of the skull and ribs are attacked early. The junction of the bony ribs with their cartilages becomes enlarged. The softened ribs are bent by atmospheric pressure and by the contraction of the diaphragm in breathing. The long bones become bent and are swollen at the extremities. Bow legs, knock knees and sabre skins are the result. Ofttimes the spine becomes twisted and the pelvis distorted, increasing the danger of child bearing in the female. This was also responsible for the rejection of a number of army recruits during the war. This disease was known to the Romans and Greeks and can be detected in the skeletons of the ancient Egyptians. It is no doubt the most potent factor interfering with the efficiency of the human race. As the progress in curing a case of rickets is determined by the progress of calcification in the young bones, by means of X-Rays, let us consider the sequence of events in the growth of bone.

The growth of bone in length is due to a definite sequence of events which transpire at the junction of the shaft of the bone with its head. The shaft is composed of growing bone. The cartilage is in a resting state and as the animal grows the cartilage is converted into bone through expansion of one or more centers of ossification which form in it.

The cells of the resting cartilage have no particular arrangements until they come within a short distance of the shaft or a center of ossification. The cartilage cells then arrange themselves parallel to the long axis of the shaft or the radii of the ossification center. Lime salts are deposited in these cells which are adjoining the shaft. These partially calcified cells thus formed are known as the zone of provisional calcification and resemble a honeycomb. As the shaft grows, tiny blood vessels sprout from it and each vessel opens a single compartment in this honeycomb structure. The cell so formed is now free to degenerate or become a bone-forming cell. Large numbers of bone-forming cells follow these tiny blood vessels

into the cartilage. These settle on needle-shaped projections protruding from this honeycomb structure. These bone forming cells then bury themselves in a tissue known as osteoid tissue which they manufacture. This receives a deposit of lime salts and becomes bone. Old bone is constantly being removed and new bone is always being formed. In a normal, healthy bone these processes are always in a dynamic equilibrium.

In a rachitic bone all these processes of growth and maintenance of equilibrium are abnormal. Calcium salts are not deposited in a normal way. In a normal bone the junction of the cartilage with the shaft forms a regular, straight line. In the rachitic bone it is ragged because there is no provisional zone of calcification and the cartilage is invaded by large tufts of blood vessels from the shaft which destroy it irregularly. At the same time masses of cartilage persist where they should be destroyed and islands remain cut off from the main body of the tissue. Osteoid is not calcified, so that the bones become soft. Animals, on account of insufficient calcification, try to compensate for the weakness and produce osteoid tissue in abnormal amounts. This over-production of osteoid produces irregular enlargement and its consequent weakness is due to lack of lime salts on bowing and fracture. This excessive cartilage seeks the weakest point in the bone which is the growing end and therefore the joints show a tendency to swell to excessive size. This general softening of bone tissue leads as well to early decayed teeth.

Cod liver oil has been known as a specific for rickets for years. Never has it been discovered just how it aids in the calcification but we do know that it does. It has been suggested that the vitamin D in cod liver oil merely acts as an enzyme, but we have no proof.

It has also been discovered that the ultra violet rays of the sun will produce the same cure in rickets as vitamin D. If chlorestol be exposed to a source of ultra violet rays, vitamin D seems to be synthesized. Chlorestol is a constituent of the skin. However, the ultra violet rays will not penetrate one's clothing and consequently sun baths cannot be resorted to altogether. Hence we must turn to a natural source of this vitamin. This accounts for the universal use of cod liver oil for infant feeding.

The concentrates of vitamins A and D as prepared from cod liver oil are worthy of consideration. They represent a concentrate of the non-saponifiable portion of the oil. Ninety-five per cent of the oil is saponifiable. A concentrate of the other five per cent greatly reduces the bulk and may well be employed where the objectionable odor and taste cannot be tolerated by the child. However, a selection of proper food containing vitamin D, cod liver oil and plenty exposure to sunlight serve as the best methods of cure, and prophylaxis in rickets. Dr. Louis Fisher, a child specialist, suggested feeding a source of vitamin D to children as young as one month. Although not universally known, the permanent teeth of a human begin their foundation as early as one month. If we as humans would look after the administration of vitamins A and D to infants as a prophylactic measure, rickets would soon be a thing of the past. Neither a fat eating man of the north nor a barbarous savage has ever been discovered who shows any signs of rachitic bones. For the simple reason that he has dieted on foods rich in these vitamins.

The expectant mother will do well to see that her diet consist of foods bearing vitamin D.

The chief sources of vitamin D are: cod liver oil, milk, egg yolk, butter, green leaves and peas. The casein of milk is a very stable and valuable source of vitamin D.

Vitamin D, as referred to before, was discovered in yeast along with vitamin B. Vitamin B is a specific for beriberi. However, vitamin D does not seem to play any role in the curative effect of yeast on beriberi patients.

Beriberi is a disease of antiquity. It was at first confined to the various rice eating countries. It developed as soon as the natives began to hull their rice. Beriberi is a form of peripheral neuritis, the nerves of motion and sensation being chiefly affected. Its incipency is manifested by fatigue and depression, numbness and stiffness of leg and more or less edema of the ankles and face. There is a general tenderness of the calf muscles and a tingling or burning sensation in the feet, legs and arms. The Japanese navy suffered greatly from the disease. This disease has a high mortality figure.

It was through the observations of Kanehiro that investigation was actually begun.

On a trip to Europe, Kanehiro notices the superior health of the English sailors. He also noted that their diet was of a superior quality. This aroused the suspicion in his mind that beriberi might be due to faulty food. Consequently the amount of polished rice in the navy rations was cut down and replaced by proteins and vegetables, wheat and barley. Since then beriberi has been uncommon. This experiment proved that beriberi was a disease due to dietary deficiency.

In 1897, seventeen years later, Eykanaan, a prison medical officer, where beriberi was prevalent noted that poultry which fed upon garbage from the hospital died with the same striking symptoms of paralysis as did his patients. After many experiments he succeeded in producing beriberi in pigeons. This disease, so produced in fowls, he called polyneuritis.

It remained for McCollum and Davis to discover the presence of this vitamin B in the germ of the rice grain. In the milling of rice the germ is knocked off as well as the pericarp which includes the layer known as the aleurone layer. This outer covering was later extracted by Funk and Dubin and was successfully used to cure polyneuritis in pigeons. The procedure consisted of extracting the grain or yeast with alcohol or water. This solution was then treated with phototungstic acid or silver nitrate—a precipitate being formed.

Following up this extraction we have many products on the market today prepared by similar means. Metagen, prepared by Parke, Davis and Company and Vitatose, prepared by E. R. Squibb and Sons, are examples.

The chief sources of vitamin B are: whole cereal grains, tomatoes, beans, raw cabbage, spinach, yeast, nuts, liver, fruits, potatoes and egg yolk.

Scurvy is another of the older diseases due to dietary deficiency. It was common during the Gold Rush of 1850 and also among the Crusaders during the thirteenth century. Vitamin C is readily destroyed by canning and drying, and the source of food for these adventures was mostly canned and dried foodstuffs. The employment of fresh fruits and vegetables as remedial agents in the prevention and cure of scurvy was discovered by common experience. In 1795 the British navy began the regular administration of lime juice to all sailors with fair success.

Scurvy develops slowly. The symptoms are loss of weight, anemia, pallor, weakness, and shortness of breath. The gums become swollen, bleed easily and frequently ulcerate, and the teeth loosen and may drop out. Hemorrhages in the mucous membrane and skin are characteristic. In the later stages of the disease: headache, convulsions and delirium are quite common.

The rat, although a common test animal, is immune to scurvy and to produce clinical scurvy the guinea pig is employed.

The discovery of vitamin C has alleviated much unnecessary suffering and loss of life. Dried milk has often been suggested as a source of vitamin C in infant feeding. It is well to bear in mind in this connection that any product such as dried milk will contain little, if any, vitamin C if it has been heated to any appreciable heat. It should be processed in vacua.

Within the last century infantile scurvy has made its debut. This is perhaps due to the extreme use of canned goods by the nursing mother and the pasteurization of milk of dairies. Practically all green vegetables and fruits are rich in vitamin C. It has been suggested by eminent physicians that lime or other juices be added to pasteurized or evaporated milk when fed to infants.

Pellagra was discovered in Northern Spain in 1735. It is confined to relatively few places. The symptoms are: an involving of the nervous system, digestive tract and skin. One of the first symptoms is soreness and inflammation of the mouth. The spinal cord and central nervous system are the main seats of injury.

Many theories have been advanced but the prevailing theory is that it is also caused by a deficient diet. It is not uncommon among the cotton growers who eat chiefly molasses, fat pork, milled cereals and muscle meats, and the addition of other foods to form a normal diet usually results in a cure. It is quite difficult to produce experimental pellagra. The query of a vitamin as being specific for the disease is still in the process of being solved. At present the specific substance is called Factor PP or Pellagra Preventative Factor.

Vitamin E is found in greatest abundance in the oil of the wheat germ, in seeds and green leaves, beef liver and egg yolk. It has

been clinically proven that rats become sterile if deprived of this vitamin.

The question has arisen—"Why doesn't someone synthesize vitamin?" The answer is—"We do not know their chemical structure other than they react similar to amino acids. Further vitamins occur in sufficient quantity in nature and the grave duty of every informed individual is to eat and teach others to eat such foods, and in such form, that he may obtain a maximum amount of these; "minute quantities of substances which are to the human machine what the ignition spark is to the automobile."

Vitamin research is quite long and tedious. Results are dependent wholly upon clinical testings which require weeks and months of careful examination before one single result may be recorded. Clinical testing involves many errors. For instance, one of Funk's leading discoveries was accomplished after years of fruitless effort which might have been accomplished in a few weeks if the proper thought had occurred to him at the proper time. He did in this long tedious experiment discover that his results were not true due to the fact that the pigeons which he had been employing in the test had been eating their own excreta. Vitamins, especially B and D are synthesized in the intestine and consequently the diet of the pigeon was not vitamin free as had been thought.

For a long time the test animals used were given ordinary drinking water to drink, but it was discovered that the many microorganisms contained therein were a source of vitamin.

At present we may be about to see the introduction of a new vitamin. In 1923 Funk and Dubin reported a relationship between insulin and the blood sugar reducing substance present in yeast and in various plants and vegetables. In experimenting with pigeons afflicted with polyneuritis they noticed a semidiabetic condition accompanied with high blood sugar and the disappearance of glycogen. On the administration of a highly concentrated vitamin B, obtained from yeast the beriberi was cured and the blood sugar returned to normal. The new work on substances, introduced to the medical world, as extractives of the Myrtaceae, may occasion the discovery of a new vitamin.

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IT IS THE SO-CALLED "GOOD" WHISKY THAT KILLS

The newspapers from time to time publish accounts of persons dying from alcoholic indulgence, and suggest that the liquor was "poisoned." In the monthly publication of the New Hampshire Board of Health, it is pointed out that grain alcohol is a very definite poison in itself and may unaided cause death, especially when taken in such concentrated forms as are now often sold by "bootleggers." If the individual is in a diseased condition, either acute or chronic, he is all the more likely to be killed by drinking whisky, whether "good" or bad. As a matter of fact, all whisky is bad whisky; and all alcohol is poison.

VENTILATION IN THE HOME

The druggist is consulted perhaps as frequently as the physician on the subject of "common colds," their cause and prevention, etc., and he can help disseminate much of the useful information to be gleaned from the publications of the United States Public Health Service, at the head of which is Surgeon-General H. S. Cumming.

In a five-year study which the United States Public Health Service has recently completed it was found that diseases of the lungs (respiratory diseases) accounted for nearly half (47%) of all of the cases of sickness reported.

For a long time it was thought that the evil effects of poor ventilation, or of a lack of ventilation, were due to chemical changes in the atmosphere; that is, to changes in the quantity of oxygen and carbon dioxide present. But about the year 1900 this idea was found to be incorrect. Now we know that the home or ordinary room is never air-tight and as a result air is always leaking in about the windows and doors. The chemical composition of room air, is, therefore, prevented from changing in any great degree and for all practical purposes remains constant.

It has been found that the most comfortable temperature as well as the most healthful one is between 68° and 70°. There should be a slight amount of air motion in all rooms such as is produced by a small window opening. If the temperature is kept between 68° and 70° the moisture of the air, or as it is generally known, the humidity, will be kept at a satisfactory point from the health viewpoint.

Scientific studies have shown that a room temperature over 70° may not be healthful because the overheating produces a slight increase in body temperature as well as the pulse rate and the breathing rate, because the blood pressure falls and there may be a decrease in the efficiency of the blood circulation system.

Studies have been made in schools in which the rooms were kept at 68.5° and 66.5°. They showed that there was 70% more colds among the pupils in the higher temperature rooms than among those in the rooms maintained at 66.5°.

The proper way to ventilate the home is to provide an accurate thermometer in each living room. This should always be maintained at 68° to 70° by regulating the supply of heat and by keeping the windows open slightly. The slightly opened window will produce a sufficient air movement in the room as so to be stimulating and refreshing and the room will feel comfortable and not stuffy. With a little experience it is possible to maintain these conditions without a great deal of effort, and for persons in good health the home will be very comfortable.

The ventilation of the sleeping or bedroom is different from the living room. Here the body is at complete rest and covered with heavy bedding which serves to keep it warm. Under these conditions it is possible to take advantage of the full outdoor air by having the windows wide open and having the air circulate about the room. This air movement is very beneficial. It stimulates the nerves in the skin and invigorates the body. Keep the windows in your bedroom open at night and keep covered with sufficient warm bedding so that you do not feel cold. Air, like sunlight, is man's great benefactor. Get all the outdoor air you can and in this way you will be helping yourself to be free of colds.—*Merck's Report*.

LIGHT PROOF MEDICINE CONTAINERS

One of the great problems that Druggists and Drug Manufacturers have to contend with is the preservation of drugs and preparations that are detrimentally affected by light. So far the most expedient method is the use of amber colored bottles and today a great number of preparations in the U.S.P. and the N.F. are required to be preserved in such containers. However, through actual experience, the light will in time penetrate the amber colored bottles to cause the same deterioration in the drug or medicine as is produced if the drug were in ordinary bottles, the only difference is that deterioration takes place more quickly in ordinary containers. This harmful effect of light has caused large financial losses to manufacturers and to druggists. It hampers the keeping of biologicals, tinctures and fluid extracts, and also limits the length of time that such preparations can be kept before they lose their therapeutic value.

So many of these deteriorate upon exposure to light that druggists have authorized a special study to discover containers which will protect their medicines and chemicals from this harmful effect. The plans of this committee which has undertaken this research were recently reported to the members of the American Association for the Advancement of Science by H. V. Army of Columbia University, head of the Committee which was formed by the American Pharmaceutical Association.

In some cases light rays seem to preserve the medical virtues of a preparation, but in others they are definitely harmful. The changes that one notices in the colors of the medicines are usually indicative of change in the medical properties.

"The following are among the changes," said Dr. Army. "The green color of some iron preparations changes to an unpleasant brown. Bright yellow ointments turn brown or green. Tinctures and fluid extracts made from vegetable drugs turn a dark color and deposit sediments. Serums and other biologicals lose their ability to cure or prevent disease."

If light proof medicine containers can be produced their use will be a great help in the manufacture of drugs and preparations that are so changed by light. Production of these widely used medicinal agents will be increased and the druggist or doctor using the preparation can always be certain that the article is of the same standard and strength as when it was assayed.

PRESERVATION OF ETHER

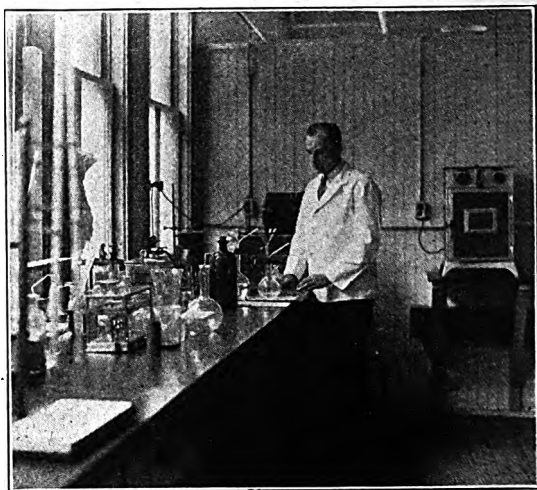
Ether, which is widely used as an anesthetic during operations, may now be stored for as long as eight months without spoiling or deteriorating, S. Palkin and H. R. Watkins reported to the recent meeting of the American Chemical Society. This valuable substance, which has made possible the triumphs of modern surgery, does not keep well in the pure state. The two chemists have found a way to preserve ether without making it less pure, using either of two preservative agents, pyrogallol or potassium permanganate, which do not in any way effect the other properties of ether—*Am. Jour. Pharm.*

PHARMACEUTICAL MANUFACTURING

The manufacturing laboratory of the School of Pharmacy is maintained and operated for the purpose of teaching the basic procedure in manufacturing pharmacy which may be adapted to any desirable volume for individual needs.

Special procedures enabling the student to make preparations in keeping with retail store requirements are stressed and it is scarcely conceivable that he should, after this basic training, revert to the time worn argument that he can buy his products cheaper than he can make them, and then spend valuable time be-rating the drug business and counter space to the slogan "Your druggist is more than a merchant."

We do not confine our work to any fixed set of preparations, but more properly he makes, under the direct supervision of a registered pharmacist, any preparations for which we may have a call from the hospitals and these have proved to be many and varied. In addition to the U. S. P. and N. F. preparations, tablets, special formulae ointments, suppositories, solutions, stains, special preparations in tubes such as eye oint-

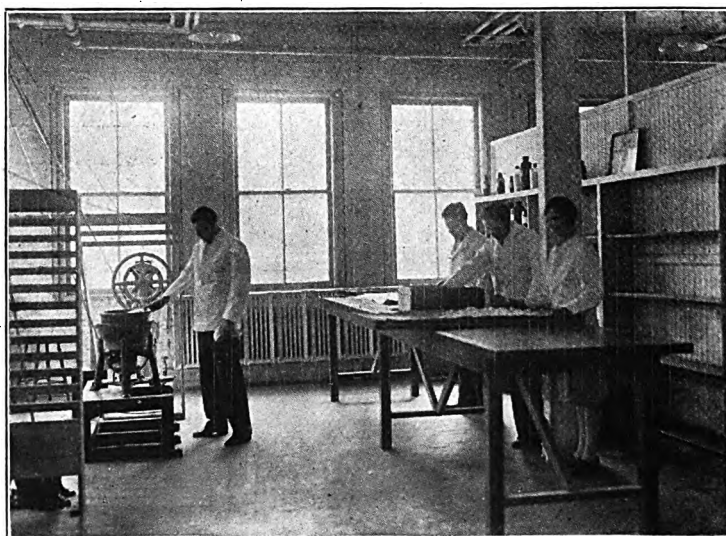


CONTROL LABORATORY

Prof. E. D. Davy in Charge

ments, lubricants, tooth paste, analgesic balm, etc., are made.

It is not expected that the retailer should make tablets or products requiring special assay such as alkaloidal products, arsenicals, iodides, or the many solutions requiring assay, but a review of the possibilities



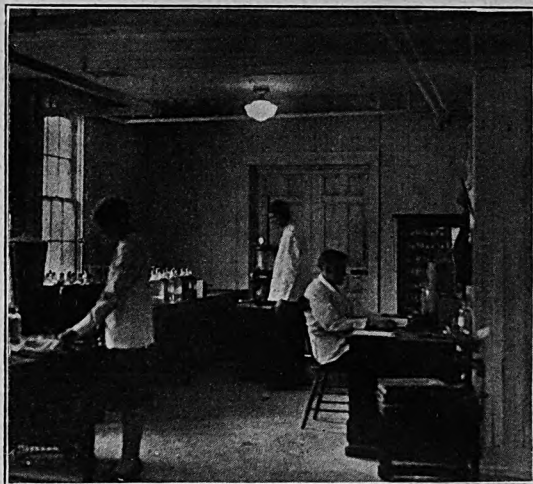
MANUFACTURE OF TABLETS AND OINTMENTS

within his scope may include elixirs, glycerites, liniments, mixtures, syrups, ointments, stains, test solutions and special formulae. The fact that the pharmacist is capable of filling prescriptions should certainly be evidence of his ability to make any of the above preparations and also answer the critic as to his ability in this line of work.

The control laboratory is maintained as a part of the manufacturing program and all preparations requiring an assay are submitted and made to comply with the standard established for them, before being sent to the hospitals. These analytical features are brought to the student's attention but a separate course is provided to teach analytical pharmacy and it is from these previously assayed samples that the material for this course was provided.

In addition to the class room work in manufacturing pharmacy, one laboratory period of three hours per week is required throughout the junior year. This is supplemented by detailing students to Lakeside Hospital where they may learn the work in the pharmacy and also become acquainted with the other branches of the hospital.

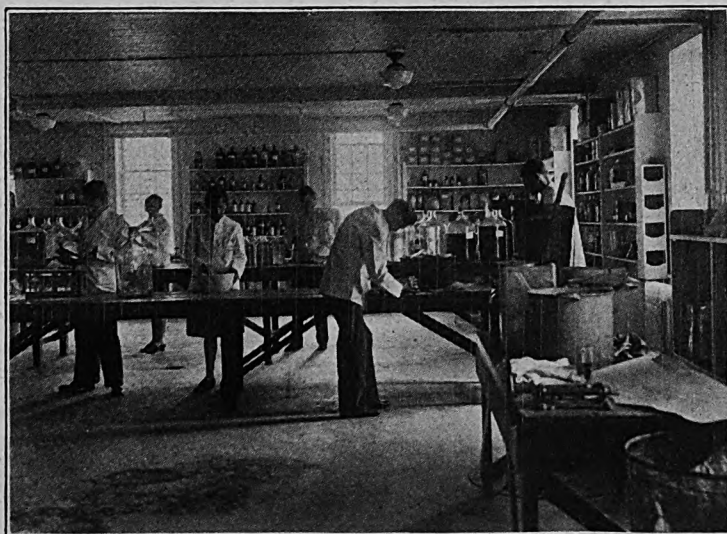
It may be said in conclusion that such products as can be profitably made in the



MANUFACTURE OF GALENICALS
Bottling and Finishing

store require no special apparatus, and no special stock of crude materials since the materials ordinarily at hand for prescription work may be used and the stock of these finished preparations may be large or small as the demand warrants, thereby obviating excessive stock of any of these preparations.

E. D. D.



MANUFACTURE OF GALENICALS

The Northern Ohio Branch of The A. Ph. A.

Those of us who feel that professional pharmacy was, is and shall continue to be—a profession of superior standards and great scope have been more than delighted to see the reorganization of the local branch of the A. Ph. A. Furthermore, it is quite gratifying to see the way the members have entered into this field of professional organization. Still more gratifying is the reception it has been awarded by the Academy of Medicine. Monthly meetings have been planned that are open to the drug and medical fields. The type of speakers that they have brought in from the outside at these meetings typify the professional attitude of the men backing the organization.

DR. LOUIS KLEIN LECTURES

Dr. Louis Klein, of the Scientific Staff of Parke Davis and Company, gave an illustrated talk on, "Newer Aspects of Gland Therapy", before the recently organized Northern Ohio Branch of the American Pharmaceutical Association on Friday evening, February 9, in the Biology Building on the University campus. Members of the Academy of Medicine were invited.

The President of the Branch, Dean Edward Spease, outlined the aims and purposes of the organization.

Dr. Klein stated that there were but two desiccated glandular products of proved merit today, namely, thyroid and liver extracts. He traced the studies of the other glandular products and indicated the progress made. He expressed himself as not being in accord with so-called "gland therapists," who attempt to treat all patients who happen to come under their care with glandular extracts. He emphasized his former statement that only two of the glandular products have been definitely proved to be meritorious.

He explained the work of Dr. Kamm and his associates in the isolation of two distinct hormones from the pituitary gland. These were called the "Alpha Hormone," or the one possessing oxytocic activity, and the "Beta Hormone," possessing pressor and

renal activity. He said it still remained to synthesize these hormones before they can be supplied in quantity. He pointed to the fact that enteric coating enhanced the activity of thyroid; one grain doses, coated, equalled three or four grains not enteric coated.

He classified the phases of gland therapy research as follows: (1) predemonstration phase; (2) demonstration phase; (3) concentration phase; (4) isolation analysis phase; (5) synthetic phase. The crowning achievement of all endocrine research, he said, was to synthesize the hormones. This has been accomplished with thyroxin and with adrenalin.

Discussion brought out some very interesting points, particularly pertaining to the popular notion, in which the speaker also expressed his belief, that the activity of corpus luteum is due to a hormone. He stated, however, that there was as yet no positive laboratory evidence in support of this view.

DR. JOHN F. ANDERSON SPEAKS

Following Dr. Klein's lecture, the next open meeting was held on the twelfth of April, at 8:00 p. m., at the School of Medicine, in conjunction with the regular meeting of The Academy of Medicine. Dr. John F. Anderson was the speaker of the evening. Dr. Anderson is Director of Research and Biological Laboratories of E. R. Squibb and Sons.

Dr. Anderson's subject was: Recent Progress in Medicine and Pharmacy. He gave a most interesting survey of the recent developments in medicine, in chronological order, such as the discovery of the various vitamins, liver extract, ephedrine and also of the work of Dr. Kamm on the pituitary body.

SUNSHINE PILLS

Pills made from ergosterol from yeast which has been exposed to ultra-violet rays have been placed on sale in England and Germany as a substitute for cod-liver oil.

ANIMAL EXPERIMENTATION--IS IT JUSTIFIABLE?

Many eminent investigators and research workers in the field of Medicine—the men devoting their lives to the solution of some of the truly great problems before mankind; who give their best to search the truth through experimental work—these men are under indictment. They are being criticized for using animals in their medical and biological investigations.

Ofttimes a layman questions the Pharmacist

Sir T. Lauder Brunton, an eminent physician and an ardent animal experimenter, wrote in 1867, "Few things are more distressing to a physician than to stand beside a suffering patient who is anxiously looking to him for that relief from pain which he feels himself utterly unable to afford. His sympathy for the sufferer, and the regret he feels for the impotence of his art, engrave the picture indelibly on his mind, and serve as a constant and urgent stimulus in his search after causes of the pain and the means by which it may be alleviated." Brunton had in mind the patient suffering from angina pectoris, an agonizingly painful disease of the heart, and he introduced the use of amyl nitrite, which often affords magical relief. The introduction of this drug by Brunton was the direct result of animal experimentation. Similarly the observation of human suffering at the bedside and the depth of sympathy felt by the physician is often the direct stimulus for investigation involving animals. The physician's sympathy in these cases does not take the idle form of such phrases as, "Too bad; I am sorry but we must save the guinea-pigs." He leaves the bedside with the determination to be able to control the next such situation which arises and to bestow the blessings of relief for which his profession stands. He knows full well that to accomplish his purpose means energy, hard work, ingenuity, ability to stand up under disappointments, financial loss and self-sacrifice. All these obstacles he is ready to face; they are inevitable and he knows it. But there is a form of obstruction which he ought not to have to encounter. It is the opposition of persons who are either fanatical or misinformed on the subject of animal experimentation. Among the former, one often sees individuals with an excess of

as to the value of animal experimentation in comparison with the knowledge gained from research work. The United States Pharmacopœia specifically prescribes that animals be used in standardizing certain potent preparations and drugs. Is man justified in using these animals? Is man justified in using lower animals to increase the health, the happiness, and the efficiency of mankind? This is the fundamental question about which centers all the discussion concerning animal experimentation.

money and leisure and no legitimate outlet of their energies, who either have no conception of the mass suffering of the race, or are totally callous to it, who seek to interfere with his noble purpose and revile him, his methods, and his purposes to the uninformed public through falsehood and calumny. Attempts to convince such persons of the legitimacy and propriety of animal experimentation have been and probably will always be fruitless; but, as already intimated, there are other individuals who have taken this matter up largely because of the misrepresentations perpetrated by their fanatical colleagues. It is to this misinformed class and to the uninformed public that the experimenter must appeal, and in so doing, he feels that their intelligence and rational philanthropy will be ready to meet him half way and result in a complete understanding.

When the first man asked, "Why am I sick?" "How did I become sick?" "By what means can I get well?"—Medical Research was born. For twenty-five centuries these questions as to health have been constantly and consistently asked and the medical profession has been trying to answer them.

For many centuries the doctors had only clinical observation: that is, pain and the physical surface phenomena of the body of the patient—fever, eruptions, swelling, wounds, fractures, and other accidents. Then in the sixteenth century the experimental method began slowly to arise. Research work developed rapidly. Today, the observer having the now known causes of human and animals' disease at his beck and call, induces in animals under certain conditions chosen at will, varies these conditions one at a time, notes the differing results of each

change, not only by his five senses, formerly his only allies, but by many instruments of precision wholly unknown fifty years ago. He can also verify his inference not only by observing external phenomena, but by post-mortem examinations in animals of every internal organ at varying periods in the progress of the disease and so learn the "natural history" of the disease, the phenomena of its various stages, and the relative values of various remedies or operations.

Those opposed to the use of animals in medical and biological investigations hold that man has no right, and their contentions are that such use is ethically undefensible; yields no results of value; and is accompanied by great cruelty.

Man has taken to himself the right to hunt and fish, to slay and eat, to use the horse to carry his burden, and the dog to watch his flocks, the bees to hive his honey, and the hens to lay eggs for him. But more than this, custom and the law have given him the right to interfere with the natural course of the life and habits of animals, to deform for his own safety, to deprive the calf of its own mother so that he may have milk and cream and cheese; to deprive the sheep of its wool so that he may have clothes.

In these and many other ways has man established the moral principle that he may use animal life for food, for clothing, to give him pleasure, to lessen his labor, to increase his happiness, his wealth, and his power. In all this no serious objection has been raised; it is only when man wishes to use animals to aid in the conservation of health that the protest comes. But if the moral principle based on custom allows man to use animals to obtain wealth but not health; to geld the horse or ox for strength or the chicken for flavor of its meat, and does not, in the minds of some, allow him the equally free use of animals for the study of the cause and course and cure of disease. It is evident that custom, though it supports every other use of animals for the benefit of man, is not a satisfactory basis of argument concerning animal experimentation.

A large mass of evidence exists to show that most of the great facts of medicine upon which modern practice rests are the result of animal experimentation. With the loss of a few hens, Pasteur learned the cause for anthrax and proposed ways and means of preventing and curing this sickness. By the

vicarious sacrifice of a few sheep, countless flocks and herds have been rescued from the suffering and death to which they were doomed by Nature's cruel experiment. By experimenting on hens and sheep Pasteur discovered that the anthrax bacteria could be cultivated at 42 or 43° C., but in a weakened form; i. e., they never develop spores. At 45° C. the bacteria themselves could no longer be cultivated. From these experiments he developed a virus which saved thousands of sheep from death due to anthrax bacteria.

Drugs, because of the similarity of its action on man and higher animals, are standardized by biological methods—that is, testing on animals. The active principles of certain important drugs cannot be quantitatively determined by chemical means with the desired accuracy. The most important instances are the drugs of the digitalis series, the drugs acting on the uterus, and antitoxins vaccines and serums.

The digitalis drugs are used in the later stages of organic heart disease, often prolonging the patient's life and enabling him to return to the ordinary duties and pleasures of life. When this drug is administered, the physician must know that the particular specimen is not inert, that it has the power to do that which is expected of it, and finally what dose of the particular preparation is required. This can be ascertained only by experiments on animals or by its use at the bedside of the patient when human life lies in the balance, with the family watching the experiment, and the fate of the family at stake.

The action of digitalis on the frog and on the cat is sufficiently like its action on man to enable one to determine its potency as a cardiac drug and to determine its dosage. In the frog the digitalis bodies act also on the muscle of the heart, increasing the contractions and by determining the amount required to bring the heart of a 20 Gm. frog to a systolic stand still in exactly one hour, we learn the potency of the drug for man also.

Ergot and pituitary extract are used to prevent hemorrhage following childbirth. Not infrequently following delivery, the uterus fails to contract and remains flabby and dilated, and severe bleeding results. The two drugs that are most used to bring about contraction of the uterine muscle, thereby constricting the blood vessel and stopping

hemorrhage, are ergot and extract of the pituitary gland. Here also, the active principles cannot be quantitatively determined, and biologic tests must be resorted to. In this case, the best test object is the uterus of the guinea-pig. The action on the uterus of the guinea-pig is the same as on the human uterus—the drug causes contraction of the uterine wall. Surely, the antivivisectionists would not have the physician determine the potency of the drug on the young mother, nor would they take the responsibility for the loss to the husband and new-born, for the ebbing away of the mother's life because the preparation of the drug was inert. The same conditions obtain in determining the potency of diphtheria antitoxin and other anti-toxins. Here, again, in the absence of animal experimentation the physician would have to determine whether or not the antitoxin was active on the child sick with diphtheria. How many persons would consider such a procedure in the case of their own child? In the light of these facts consider for a moment the responsibility which the antivivisectionist takes towards all mankind in urging the abolition of animal experimentation.

Within the last fifteen years, there has been great progress made in the treatment of disease. The increase in the amount of animal experimentation has placed the use of drugs on a much firmer basis. Nearly all valuable new drugs have been introduced by the route of animal experimentation. Animal experimentation has resulted in increasing the usefulness of old drugs. It has also been extremely useful in discarding drugs that are useless, and in clearly defining types of cases in which a given drug is indicated and may be of service. The result of all the work that has been done is that drugs are used today in a much more scientific way than formerly, and drugs are not expected to accomplish what is impossible. Thus in degenerative diseases in the course of which specialized tissue has actually disappeared as a result of disease processes and has been replaced with inactive scar tissue, and when such loss of tissue produces symptoms, it is vain to hope to restore the lost tissue by drugs. The use of drugs in such conditions is as futile as would be an attempt to cure a wooden leg or glass eye by drugs.

No more striking instance of the value of experimental research is known than the re-

cent and impressive discoveries in syphilis. For four centuries this disease has ravaged the world. During all these four hundred years it has been studied clinically by many of the wisest and shrewdest surgeons. Physicians had learned how to abate its evils to a considerable extent, but they did not know the cause or any real cure. It never occurs naturally in animals. Many attempts have been made to inoculate them so as to study the disease experimentally, but always without success. Finally in 1903, Metchnikoff succeeded in inoculating some higher apes. Now mark the instant progress in knowledge directly due to animal experimentation. Two years later, in 1905, two Germans, Schnaudium and Hoffman discovered the germ of the disease. The diagnosis now could be made with certainty, not only during the active existence, but years and years later when the diagnosis was generally inferential and uncertain.

In 1910 Ehrlich started out with the drug arsphenamin, which was introduced in the treatment of syphilis. He started out with the information that an organic arsenical compound known as atoxyl is useful in the treatment of diseases caused by trypanosomes, such as trypanosomiasis (South African Sleeping Sickness). The Trypanosomes are biologically closely related to *Spirochaeta pallida*, which is the infectious organism in syphilis. Trypanosomiasis is virtually always fatal if untreated. Ehrlich found that atoxyl has no action on the organism in question when they are exposed to the drug in the test tube. In the infected animals (rats, mice, and fowl) the drug has a definite destructive action on the parasites. On inoculated animals he tested one preparation after another, but found this one too dangerous, or this one ineffective, others impracticable, and discarded them for one reason or another. The lengthening list of preparations grew to one hundred, two hundred, four hundred, and six hundred without a single entirely satisfactory result. Imagine what six hundred complicated tests means.

Finally, the six hundred and sixth experiment succeeded! The six hundred and sixth substance known as arsphenamin, had outstanding value in the treatment of animals experimentally infected with syphilis. The next point that Ehrlich had to elucidate was the ratio of the curative dose to the maximal tolerated dose. For a drug to be useful in

medicine; there must be a sufficient margin of safety between the dosage which will be beneficial and that which will do harm. This ratio must again be worked out on animals. Following this part of the study the toxic dose of the drug is determined in a series of experiments on animals. Then its pharmacological action on animals is studied; its point of attack is determined and toxic symptoms are learned. Without this preliminary animal experimentation it would be impossible to know where a drug would act or what drugs were worthy of study in human or veterinary medicine. No man who had the proper feeling towards his fellows could be induced to make such a study at the present time without the information to be obtained by animal experimentation.

I wish to make a brief summary of the practical achievements of medical investigations which are the direct result of animal experimentation, or are based on the principles concerning diseases which have been established through such experimentations.

1. The discovery and development of the antiseptic methods which have made possible all the wonderful results of modern surgery.
2. The practical development of modern abdominal surgery, including operations on the stomach, intestines, appendix, liver, gall stones, bladder, pancreas, spleen, etc.
3. The development of the modern surgery of the brain.
4. The almost complete preventing of lockjaw after operations and even after accidents.
5. The abolition, whenever the proper methods are taken, in this country and the Canal Zone, of Yellow Fever.
6. The development of a method of direct transfusion of blood which has already saved many lives.
7. The reduction through the use of antitoxin of the death rate of diphtheria all over the civilized world.
8. The discovery of the remedy (Salvarsan, which bids fair to protect innocent wives and unborn children, besides many others in the community at large, from the horrible curse of syphilis.
9. The discovery of the vaccine against typhoid fever, which in the recent maneuvers on the Mexican border prevented the development of typhoid among the soldiers, which in hospitals has greatly reduced its incidence among nurses, and which is now

coming into general use in all places where infection is possible. The improved sanitation which has helped to reduce the typhoid death rate in this country is itself a result of bacteriologic experimentation.

10. Many recent activities indicate that there is gradually nearing the discovery of the cause, and then it is hoped, the cure of several scavages of humanity as cancer, infantile paralysis, sleeping sickness, etc., are to come under man's control.

Forget for a moment that the methods of animal experimentation have given us practically all our knowledge of physiology and hygiene, the science of bacteriology, aseptic surgery and local anaesthesia, and have greatly contributed to the knowledge and safety of the general anaesthesia, and the proper use of most of our drugs. In brief, let us suppose that the methods of animal experimentation has not added immensely to our knowledge of human and veterinary medicine and practically rid the whole world of Asiatic cholera, yellow fever, bubonic plague, and many terrible epidemic diseases affecting animals. On this supposition, let us imagine that a physician sees a patient suffering with general paresis resulting from an accidental and innocent infection with syphilis years previously. He knows that the mental impairment if untreated will be permanent, that the family will lose a valuable member and will be stigmatized by having a member die in a hospital for the insane, and that the marriageability of sons and daughters will be interfered with. Suppose this physician begins an investigation involving animals in the determination to find a way of treating or preventing the development of the disease, believing that animal experimentation had never up to that time accomplished anything. Should he be helped or hindered in this work? Let those who suffer, answer; or, if they cannot, let those who see them or render all aid in their knowledge answer for them. But do not allow the answer to be given by those who are ignorant and refuse to be informed, and who lead such happy lives that they never come in contact with anything more pitiable than a dumb animal. Their opponents see poignant human suffering all the day, and every day. The ideal and logical solution would be to let each group turn its attention to the relief of the type of suffering it sees.

Maurice H. Cole, '29.

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DOCTOR OLIVER KAMM

In these days of pseudo pharmacy it is ever so inspiring to the embryo pharmacist to see the acceptance by the scientific world, the accomplishments of a man great in the field of medical research.

If we but keep our eyes open to what is going on around us we need have little doubt that the field is broad and inviting. If we but glance for a minute at the field of glandular therapy we view an unlimited field of research. A field which when understood will do much to relieve the sufferings of humanity.

This year the annual One Thousand Dollar Prize of the American Association for the Advancement of Science was awarded to Dr. Oliver Kamm, Research Director of Parke Davis and Company, in honor of his discoveries on the hormones extracted from the pituitary gland. After much painstaking research he succeeded in isolating the two hormones found in the posterior lobe of the gland. The anterior lobe of the gland you will recall, regulates the growth and the shaping of the body; dwarfs and giants owe their abnormality to its malfunction.

Through his work on the posterior lobe, Dr. Kamm has shown two definite hormones to be present in that portion of the gland. The "alpha" hormone which is of value in obstetrical practice and the "beta" hormone which regulates the amount of water in the tissues of the body. People who are highly sensitive to the "beta" hormone are usually fleshy. People who do not react normally to this hormone or whose supply of this hormone is deficient are likely to be thin in spite of all the "stuffing" they may do to put on weight.

Glandular therapy has been the foothold of many quack gland therapists and the true knowledge of the composition of the pituitary is no doubt the greatest asset to experimental medicine within the last few years.

THE HABITS OF SPONGES

From a Paper Read Before the Cincinnati Research Society

By J. T. LLOYD, PH. D.

Sponges occur in all oceans, in fresh water lakes, ponds and rivers of all continents. In the ocean they are found from tidewater to the greatest known depths. The deep water Hexactinellida whose delicate siliceous skeletons are objects of such marvelous beauty, do not reach their maximum numbers until a depth of more than one thousand fathoms (more than a mile) is passed.

Reproduction among sponges is accomplished by three distinct methods. The simplest of these, "budding," takes place in nature when a portion becomes broken from the sponge colony and starts life as a separate individual, much as a branch broken from a willow tree may take root and grow into a separate tree. This form of reproduction by fragments of the colony is now being used to serve the commercial interests of the sponge fisheries. For this purpose living sponges of the most desired kinds are cut into fragments, which are planted on the sponge beds where they grow into mature sponges. This is the only manner by which the depleted sponge beds can be replenished by man. By this method seven years are required to develop a sponge of commercial size.

Sexual reproduction is the most usual mode of natural propagation. The young sponge, or larva, developed by the union of the two sex elements, is a minute creature which swims free in the ocean, feebly propelled by minute vibrating hair-like processes, termed cilia. The larva resembles the parents so little that no flight of the imagination could conceive of their relationship. After a period of free life, the larva sponge, if fortunate enough to settle on some solid support, becomes fastened and completely alters into the well-known adult form; after once becoming sessile, it is never again capable of moving from place to place. Probably the larva's own power of locomotion could carry it but a short distance from its place of birth. However, when one considers that some ocean streams move almost a hundred miles in a day, the wide distribution of sponges can be readily comprehended.

The third form of reproduction is found among the fresh water sponges, and perhaps a few marine species. It is termed "gemmu-

lation," and is a provision Nature makes in many of the lower plants and animals that live in environments which undergo radical changes, such as drying or freezing. The gemmules are egg-like bodies which ordinarily form in the body of the parent when its environment starts to change. Unlike true eggs, the gemmules are multicelled and development does not require the union of sexual elements. Each gemmule is surrounded by a hard shell and can withstand freezing temperatures or long periods of desiccation in hot sunshine. It is largely through the agency of gemmules or "winter eggs" that the repopulation of temporary pools formed by the freshets of springtime takes place.

For the most part sponges show but little preference for the nature of the support on which they spend their lives. Any enduring hard object, washed by fresh clear currents will do. There are, however, a few species which have become dependent upon other organisms for their existence. Conspicuous among these are the small sponges that tunnel in the shells of oysters and other mollusca, and one species that is found nowhere except on the backs and legs of certain crabs. The first of these finds protection in the oyster shell, doing little or no harm to its host, while the other in return for transportation offers an effectual, portable hiding place to the crab.

Sponges are now quite generally regarded as animals, although a generation or so ago most people, with the possible exception of the ancient Greeks, thought they were marine plants. Some scientists of the past generation though unwilling to separate them from the vegetable kingdom, perceived that they had many of the characteristics of animals. To these men they were known as zoophytes or animal-plants.

Before the microscope made observation of minute protoplasmic structure possible, it is remarkable that even the most critical observers should have even suspected the animal nature of these collapsible masses of felt-like fiber. Motion, the popular distinguishing character for separating plants from animals, is entirely lacking or limited to the power of contraction possessed by certain species. Even this contractile power is less than the movement of some sensitive plants. Lacking as they do, all perceptible organs, it is, as remarked by Dr. Soltars, "by negative characters that sponges may most easily be recognized."

In medicine, calcareous and siliceous sponges have never found a place. Only the felt-like sponges, such as the familiar bath sponge, have been employed. These have skeletons of spongin, which is remarkable for its large content of iodine.

In some tropical species, according to published reports, the iodine content may run as high as 8 to 14 per cent, while seaweed from which commercial iodine is obtained, does not exceed 1.5 per cent. If, as is estimated by Stanford in Thorpe's Dictionary, the water of the Atlantic Ocean contains only one part of iodine in 280,000,000 parts, each pound of these sponges contains the total iodine content of almost forty million pounds of water.

That this enormous amount of water could be circulated by the delicate flagellae seems beyond the limits of reason. It has been suggested by John Uri Lloyd that the abstraction of iodine from the water may form an "iodine vacuum," so to speak, which is filled by the inrush of iodine extending from afar in the surrounding water. Thus the iodine may be depleted from water far from that which touches the sponge. Another theoretical explanation is the possible increased iodine content of water in localities where sponges grow by the disintegration of the remains of kelp, sponges and other marine plants and animals. Or, it may be that sponges do not themselves abstract iodine from the water, but obtain it from the organisms they consume as food. Perhaps plants alone possess the power of abstracting iodine from the sea. Whatever the explanation, it seems beyond comprehension to understand the power of these animals to abstract such quantities of iodine or silica from the dilute sea-water solution.

In form there is wide variation among the different species. While some maintain a fair degree of adherence to a general type, others are profoundly influenced by the contour of environment. Some species spread over or around their supports while others grow upward in stemmed cups or branched bunches of finger-like stalks. Some, like the bath sponge, approximate spheres, while others assume forms of the greatest variety.

The supporting skeleton of sponges is composed of calcium or silica or, like the bath sponge, an elastic felt-like network of spongin, an organic material akin to silk. Some have siliceous spicules cemented with spon-

gin, while in a few the skeleton is entirely absent. The calcium and silica of sponges is formed into spicules, often having beautiful and complicated forms.

For present purposes a sponge may be likened to a thick-walled vase, with its entire surface perforated by small holes leading into its interior cavity. Of course, only a few sponges are this simple. More complex canal systems are the rule, but these are formed by the union of many of the vase-like systems. In life, the never ceasing lashing of minute, delicate, protoplasmic threads, termed flagellae, scattered over the lining of the channels, keeps up a constant flow of water. The current always enters the many small, incurrent canals and leaves by the large excurrent channel, corresponding to the mouth of the vase. In passing it bathes the epithelial lining of the sponge with an ever fresh respiratory current. It carries in food material in the form of minute, organic particles and also eliminates waste. It supplies the inorganics which the protoplasm extracts with a nicety that is unparalleled by the most delicate methods that man has invented.—*Drug Bulletin*.

STATE DEDICATES CHEM LAB TO LATE RESERVE PROFESSOR

Ohio State University recently dedicated one laboratory in its new chemistry building to Edward William Morley, for nearly forty years professor of chemistry in Western Reserve University.

On the wall of the new Morley Laboratory at Columbus appears a plaque engraved as follows:

"The Morley Laboratory. 1838—Edward William Morley—1923. For thirty-seven years professor of chemistry in Western Reserve University—A man of fine culture and broad sympathies—A great teacher and a master of experimental research whose determination of the densities of hydrogen and oxygen are accepted as standards throughout the scientific world. $H:O=1.008:8$. Erected by the first year chemistry class of 1926-27."

Morley's original apparatus, much of which he had to make, is being kept intact in the Morley Chemical Laboratory on the Adelbert campus by H. S. Booth, assistant professor of chemistry in Western Reserve University.

THE ERGOT QUESTION

Much of the dissatisfaction with the results from ergot administration has its explanation in the use of preparations which do not contain the active substances.... If the action of ergot is desired, preparations should be used which have been shown by the proper type of assay to be active.... The active substances in ergot or its preparations are histamine, tyramine, ergotoxine and ergotamine. All of these substances will stimulate the isolated uterus, but there is no satisfactory clinical evidence for the value of tyramine or ergotoxine in obstetrics or gynecology; the evidence for histamine is somewhat questionable; adequate clinical as well as experimental evidence exists to justify the conclusion that the alkaloid ergotamine is the most important constituent of ergot, and the one whose presence in ergot preparations should be insured. An examination of a number of the ergot preparations available in the market reveals that only the U. S. P. fluidextracts contain important amounts of the active alkaloids. Only the official fluidextracts or preparations definitely shown by proper methods of assay to contain the alkaloids of ergot should be used in medicine.—*The American Medical Journal*.

SLEEPING SICKNESS REMEDY

"Drug 115", developed by Dr. A. S. Loevenhart and Dr. W. F. Lorenz of the University of Wisconsin and recently declared to hold high promise for treatment of paresis of the central nervous system, also has shown encouraging results in the treatment of sleeping sickness, which claims 100,000 victims a year, according to Dr. Warren K. Stratman-Thomas of the University of Wisconsin, who is heading a sleeping sickness expedition in the African jungle.

The Parke, Davis and Company laboratories, which have already furnished him with 18,000 doses of six new drugs, will send him several shipments of Drug 115, which he stated in a report to the John Simon Guggenheim Memorial Foundation "warrants further study." He is treating sleeping sickness in Government laboratories of the Belgian Congo and also of French Equatorial Africa, and hopes to extend his work into Rhodesia.—*Drug Markets*, January, 1929.

EDITORIAL

It does not seem amiss, with this issue of the *Pharmaccon*, to bring before the Pharmacy student world some of the reasons for such a paper as this, other and apart from what is normally supposed to be the function of the average high school and college paper.

Professional School Papers

There have been a large number of these, and similar papers, issued for quite some time and the number is increasing. The most of them issued by Schools and Colleges of Pharmacy have come into being during the past few years. Many organizations, secret societies, college fraternities, manufacturing establishments, and, indeed, all types of organizations have published journals or papers. The idea of a small paper representing individual units of an organization, such as ours does, is of quite recent origin. Is it worth while? It is the object of this short paper to present one or two reasons for them and to urge upon all schools a similar activity.

It is, first of all, one direct contact with the alumni of a school, or members of an organization and is a medium to carry information to people directly interested in the organization that will never reach them either by letter or word of mouth and some of this information is specific and not of enough general interest to merit space in larger publications.

It serves as an open forum for the expression of opinions upon subjects of vital interest to each individual writing and is a medium wherein the student, a novice at writing, may express his ideas. He may here give expression to an idea that may not appeal to his elders and may not have any general appeal at all, but such expression may be viewed by the older ones of us, as practice, and as a beginning from which eventually may grow something worth while. Where else can he do this?

Some day this professional student may be called upon to write an article for a larger magazine, to write a report in his capacity as officer of an organization or chairman of a committee, to write a scientific paper and, indeed, to write an address and deliver it. When this time comes he

will be glad of the practice he received and the start he made upon this small paper. From a faculty point of view these papers will bring to light talent that has not hitherto been discovered.

Would not a short paper on the history of the "Beginnings of Our Editors" of the pharmaceutical press be interesting? I wonder if each one can remember when and where he wrote his first article.

May we hope that students of pharmacy will accept this opportunity and that faculties will encourage it.

Is the following list chronologically correct?

- Purdue Pharmacist—Purdue University
- Pharmaccon—Western Reserve University
- Papyrus Ebers—University of North Dakota
- Pharmascope—Philadelphia College of Pharmacy
- Rex Ray—Rutgers New Jersey College of Pharmacy.—*Edward Spease.*

Any one who has made the trip to Parke-Davis can tell you of the vast amount of knowledge obtained in that brief stay. The fact is that it takes about a week after we return to get it all figured out.

The Parke Davis Trip

You cannot help but be a better salesman and pharmacist after you have once taken the P. D. Trip. The vast amount of money spent for research, the great care taken in manufacture and control of pharmaceuticals, and the exacting detail given to standardizing biologicals will amaze you. You can well expect to see great things when we make this trip the tenth of May and we assure you you will not be the least disappointed. The house of Parke Davis is opened wide to you and you are made to feel as welcome as the proverbial flowers of May. We are indeed fortunate, as a school, to be able to make this bi-ennial trip across the lake. Any of the alumni who might desire to take this trip with us are cordially invited. Be sure and sleep plenty the night before. The night of the trip will be—"Ask the man who went before."

It is but a short time until many of us will enter the lecture room and laboratory for the last time in our college career. We will then be looked upon by the observant, critical world as "college graduates." We will be considered as prototypes of our Alma Mater. What impressions of W. R. U. School of Pharmacy will we reflect through our daily habits, professional practice and words spoken in regard to our Alma Mater?

We might well ask at this point: What does W. R. U. mean to us? Has it merely served as a means to an end? Has it merely helped us to obtain that coveted degree? Why is W. R. U. a better school than any of the numerous others that we might well have attended? Many times in the near future we shall be confronted with the question: Why did you choose Reserve as an institution of higher learning? What will your answer be? Will you boost your Alma Mater and win the heart of another for your beloved school? Many newly made graduates are oftentimes heard to pass slurring remarks about the institution to which they are indebted for their learning. These remarks are quite often made without any thought as to the purpose the party had in asking you for your opinion of the school from which you have just graduated. You owe it to yourself and to your school to begin right now and check up on just what your Alma Mater has done for you. In a student body as small as ours it is next to impossible to work up a tense school spirit that is present in many of the liberal arts colleges. We cannot support championship athletic teams such as football, track, rowing, basketball and baseball. But were we looking for such characteristics and activities when we chose the professional field of Pharmacy? Surely not. It is quite true that such activities are oftentimes the basis of standard upon which the undergraduate or student just out of high school judges our American colleges. We came to pharmacy school for one definite purpose. That purpose was to study a profession. It is obvious that we must consider the benefits derived from our school in this light. Let us review a few of the things W. R. U. has to offer in the way of pharmaceutical training.

In this day and age the personal factor is one of the most important items to be considered in any institution or business organization. The faculty that goes to make up our composite of knowledge here at Reserve is without doubt the equivalent of that found in any College of Pharmacy in the United States, and superior to many, we are proud to say. The man teaching in a professional school, such as ours, we would believe requires many characteristics not so necessary in other lines of the teaching profession. We shall not endeavor to set down standards for our faculty in this column but it may be well to call to mind a few of the more common characteristics that work for harmony and effectiveness.

The primary factor in the "Master," as we see it, is that he be thoroughly versed in his subject. Think for a moment of the thoroughness of some of your courses and see if you do not agree that the subjects taught you are not only most completely covered, but thoroughly explained.

Have you ever gone to one of the faculty and been refused an answer to your question? This initiates another desirable characteristic. We are indeed fortunate to have men in our faculty who are at all times approachable and willing to discuss with us any particular phase of our profession. Another quite evident and valuable asset is that our faculty members represent many fields of professional activity, varying quite a bit in nature. We have the retail druggist represented, the hospital pharmacist, the professional pharmacist, although the line of demarkation between these three overlaps considerably, the manufacturing pharmacist and analyst, the research man, the commercial pharmacognocist, the specialized chemist and the executive and organizer. If we be but half awake and observe we cannot help but gain a liberal amount of knowledge not found in textbooks.

Surely to be an efficient instructor one must be a firm believer in what he is teaching. Sincerity in his line of work is an outstanding characteristic of every faculty member, we can easily note.

It was the privilege of the writer to see gathered together at one time several hundred men representing faculties from all over the United States at the last A. Ph. A. Convention and it was a source of satis-

faction to realize that outside of the classroom as well as in the classroom we had such men as were complementary to a professional school. We are granting that the man as an individual character makes for as much in a professional field as the man as a scientist.

The surroundings of our school do much to foster professionalism. In a great, if not the greatest, medical center in the country it is inevitable that some prospective of the future needs of professional pharmacy be nursed along in the student mind. In direct contrast with this field we are in a city of vast commercialism. The student who is desirous of really using his college training to an advantage will find an excellent field for study, in the city of Cleveland, in regard to the possibilities of professional pharmacy vs. commercial pharmacy.

In the way of equipment for pharmaceutical training we are quite well fixed here at Reserve. It is true that we are badly in need of a new building but in contrast with other schools the country over we are not so greatly in arrears. As the clothes do not make the man neither does a fine building portray a fine center of learning; furthermore Rome was not built in a day. Did you ever stop to consider added features such as a manufacturing laboratory and hospital internship? Perhaps these courses to you seem superfluous but ask the average pharmacist today what his knowledge of the mechanics of a hospital are and see how little he really knows about it.

We could go on and enumerate many other outstanding factors that make for a better school here at W. R. U. Perhaps some others have already suggested themselves to you. Think it over and be prepared to boost your Alma Mater when you have the opportunity. A chain is no better than its weakest link. Are you going to be the one to break when the stress of questioning and criticism is put upon you?

Let us then carry out our professional practice, daily habits, and conversations in such a manner as to uphold W. R. U. School of Pharmacy as the peer of all others.

R. M. P.

The worthwhileness of college education is always a moot question, no matter what

Convertible Education Versus Real Education

phase of it happens to be in the limelight of controversy. Just recently educators and editors have been giving their attention to some utterances emanating from Co-

lumbia University with regard to the "convertibility" of a college education. That is, from a financial viewpoint, can a college education be exchanged for cash?

Without entering into a discussion of the arguments brought forth in the defense of both affirmative and negative replies to the question, it does appear that there is one educational by-product—the degree—that is a real commodity. As one writer puts it, in so many words: "Degrees cost work, time and money; they can be exchanged for jobs, security and prestige." From this point of view it would seem that education, if we think of it in terms of the higher degrees, is a commodity and therefore must necessarily be governed by the fundamental laws of economics. When there is an excess of any given commodity in the world's market, the current price for that commodity will fall to a lower level. The type of education, however, that fits men through business, professional, or technical training by trade-marking them by means of certain degrees, which are supposed to proclaim their proficiency to the world, is not necessarily the real education that develops cultural background and adjusts the individual to the spiritual possessions of the race. Thus we see that real education may not be greatly furthered and rounded out by much of the so-called higher degree education which appears to be of a true commodity nature and can lead only to what some people believe to be a fuller and happier life insofar as it can be exchanged for a cash price.

Herein lies parallel but controversial tendencies. If the higher degree is to become the golden fleece of the educational world—if the medieval philosopher's stone becomes the modern philosopher's degree—then we can no longer defend certain educational values on the ground that earning power is no criterion of the value of an education. So long as we claim a fuller and

happier life on cultural and spiritual grounds, it is hardly reasonable to expect the seekers of higher education to wander into purely technical and specialized details altogether too narrow to be even an approach to real education. If, on the other hand, the higher degree, as such, has money value at the present time—and we agree that it does—may it not be true that its holder, in the future, will be headed into a situation such as prevailed in Germany before the war when the holders of high degrees worked for the equivalent of a living wage only?

In view of these considerations it appears highly desirable for some differentiation of trade-marks—degrees, if you please—in the educational world in order to indicate more clearly in what field of activity the holder has put forth his efforts. If most of his work has been along lines looking toward a convertible product we can hardly expect to find the depth of intellect, the breadth of view, the wide sympathies and other cultural attributes that must prevail in the really high type of educated mind.

N. T. C.

We have frequent inquiries with regard to the interpretation of the Federal regulations dealing with exempt narcotics. In view of what appears to be a somewhat wide misunderstanding of the matter, we believe it worthwhile to print an article recently appearing in the N. A. R. D. Journal.

Exempt Narcotic Preparations

“Attention is again directed to the necessity of recording the sale, gift or exchange of exempt narcotic preparations, whether such preparations be sold outright, over the counter or dispensed on the prescription of a physician. This provision of the law, as well as a similar provision in the regulation appears to be quite generally understood by the retail trade insofar as the rule applies to ordinary sales at retail, but many retailers seem to be laboring under the erroneous impression that the mere filing of the prescription calling for an exempt preparation, or one in which the narcotic content comes within the limit of exemption, as set forth in section 6 of the Harrison act, constitutes full compliance with the requirement that a separate record be kept of all

exempt preparations sold, exchanged, or given away, though such is not by any means the case, as we have frequently taken occasion to state.

“Now, all retailers should understand that every transaction involving the sale or dispensing of exempt narcotic preparations and compounds must be recorded in a separate book kept for that specific purpose and in such manner as to enable the authorities to accurately check all such transactions without being put to the necessity of examining prescription files and other records ordinarily kept by the retailer. Emphasis is laid upon this point because of its extreme importance to the retail drug trade, and, again, because it appears to be generally misunderstood by a vast number of retailers, though the regulations for the enforcement of the Harrison act set forth the requirements in the following language which appears to be perfectly clear and readily understood: Under the heading of exempt preparations, article 107 of Regulations 5 provides in part that a separate record must be kept of disposals to persons other than dealers, including sales pursuant to prescriptions bearing the name of the person to whom the preparation or remedy is sold, exchanged or given away, made at the time of delivery, his address, the name and quantity of the preparation or remedy and the date of delivery. In other words every sale, gift or exchange of any exempt narcotic preparation or compound must be properly recorded in the registry of exempt preparations, whether the transaction be upon the prescription of a physician, or otherwise, and regardless of any other record that may be kept of the remedy, preparation or compound involved.

“While on the subject of exempt preparations it might be well to further emphasize the responsibility that rests upon all distributors of this class of preparations to exercise due care in the sale and distribution thereof in order that such preparations may not fall in the hands of addicts, for it must be remembered that the exemption clause of the Harrison act authorizes exemption with a condition attached, the condition being that such remedies and preparations are manufactured, sold, distributed, given away, dispensed or possessed as medicines and not for the purpose of evading the intentions and provisions of the act. Ob-

viously, this provision imposes an obligation upon the distributor to exercise that measure of care and diligence necessary to guard against the improper use of this class of preparations. In this connection, warning is again issued that the narcotic division will no longer overlook or deal leniently with cases reported by inspectors involving loose or improper record-keeping, nor any case in which it is shown that excessive amounts of exempt preparations such as paregoric, are sold to any individual.

"This warning should be sufficient to cause every retailer in the land to take such steps as may be necessary to insure the keeping of an accurate record of all transactions in this class of narcotic preparations."

ABSORPTION OF SALICYLIC ACID BY HUMAN SKIN

Leslie Roberts asserts that pure synthetic salicylic acid can be transferred through the epidermis into the connective tissue and thence into the blood stream. The colloids of the connective tissues retain the drug by adsorption, and from these surfaces it is liberated gradually, passes into the blood, and is mainly excreted by the kidney. The excreted portion may be estimated colorimetrically in milligrams per hundred cubic centimeter of urine, and if the quantity of urine voided in the twenty-four hours is known, the total urinary excretion of salicylic may be calculated. Absorption may take place from petrolatum, alcohol and water. The data do not admit of a definite answer to the question as to which of these solvents is the most favorable for the process of absorption, though probably petrolatum is the best solvent. The permeability of the skin to salicylic acid varies in different individuals according to the physicochemical condition of the inner environment. In respect to the mechanism of absorption, it may be said that although solid keratin is itself quite impervious to salicylic acid, it nevertheless plays an important part in the translocation of the acid through the skin. It acts through its extraordinary power of absorbing the acid, whereby a supersaturated solution is formed on the surface of the skin. It is from this surface layer that the fraction transported is drawn and not from

the mass of the solvent. The chemical form in which the acid is transported is still open to discussion. The powerful effect of salicylic acid on extravasated white blood cells is probably due to the ease with which it penetrates these cells, the resulting acidosis leading to their autolysis and final disintegration. This fact and its power of diffusing through the skin places salicylic acid in a unique position among the remedies employed in the treatment of inflammatory conditions of the skin.—*American Medical Journal*.

A QUICK METHOD FOR MAKING STARCH SOLUTION

Puffed rice is practically pure starch in which most of the starch grains have been ruptured and is, therefore, an ideal substance for making a starch solution. The procedure is as follows:—

Into 100 cc. of boiling water drop about 20 granules of puffed rice. Allow to boil until all the granules disintegrate. This should require less than a minute. Remove from the heat and allow to settle, when it is ready for use. The undissolved parts settle quickly and the supernatant liquid is poured off. If the solution is not the right strength the amount of rice can be varied to suit the operator.—*Chemist Analyst*.

BENZOATE DEPENDS ON ACIDITY

Benzoate of soda, widely used as a food preservative and often the subject of bitter controversy, depends for its effectiveness on the acidity or alkalinity of the food-stuff to which it is added to prevent spoilage. Prof. W. V. Cruess, of the University of California, reported a series of experiments he made, showing that the conventional one-tenth of one per cent is not always sufficient, and that sometimes it is more than enough.

In media that were somewhat acid, represented on the chemist's scale as "pH 2 to 3.5," less than six hundredths of one per cent of sodium benzoate sufficed to prevent the growth of moulds, yeasts, and acid-tolerant bacteria. Around the neutral point, however, as well as over into the slightly alkaline side of the balance, concentrations in excess of one and one-half per cent were necessary to inhibit growth.

HERE AND THERE

Commerce Reports for January 21 says that there is a "Good Demand for Suspenders and Garters in Trinidad" and adds the sentence that "suspenders are universally worn in Trinidad." If this information interests you, you can look up the reference.

The same Commerce Reports in commenting upon the price of men's hats in Porto Rico states that "there is an increasing demand for styles retailing as high as \$12 or \$14." This speaks well for the source of coin in Porto Rico. Let's go there.

Drug Markets for January, 1929, carries a statement probably taken from some of the reports of the Department of Commerce. It is headed, "Honduras Market Not Properly Entered" and the article follows:

"There is quite a market in Honduras for proprietary medicines, but it is not generally entered with success until a certain amount of advertising and educational work is done. Posters, pamphlets, and samples are the most common forms of advertising. Drug stores as agents are the best means of distribution in Honduras, according to the Department of Commerce.

"In entering this market one should not lose sight of the fact that advertising material, correspondence, price lists, and catalogues should be in the Spanish language to obtain best results. This is particularly true of the labels and directions on the bottle containing medicines.

"A list of drug stores in Honduras is available to accredited firms upon application to the Chemical Division."

It is interesting to note that the Department of Commerce seems to recognize patent medicines as commodities and reports upon them so that American trade will know where there are new markets and how these markets should be developed.

Drug Markets for January 1929 carries a small article and picture entitled, "R. D. Keim Honored on Occasion of Twenty-five Years With Squibb." Mr. Keim is the general sales manager of E. R. Squibb and Sons and is quite well known among druggists in Northern Ohio. The Pharmacoon desires to extend its best wishes and congratulations to Mr. Keim upon the rounding out of this quarter of a century of service to Squibb, and takes notice of this service because of the fact that all who

know Mr. Keim always think of him as a "square shooter."

PROF. HOPKINS ANNOUNCED AS CHEMISTRY SUPERVISOR

Following its plan of each year having some well known educator from an out of town university on its staff, the Summer Session of Western Reserve University will have Professor B. Smith Hopkins of the University of Illinois on its faculty. He will supervise several classes in organic chemistry.

Dr. Hopkins is the only American to ever discover an element. His finding was lithium, one of the rarer earth elements.

WATERPROOF VARNISH FOR PAPER LABELS ON REAGENT BOTTLES

An excellent varnish for this purpose may be made by dissolving transparent celluloid in acetone, making the solution to about the consistency of heavy syrup. It is to be painted on with a brush and dries very quickly, giving labels an attractive glazed appearance without greasiness or loss of transparency and thoroughly waterproofing them. It may also be used as paste for attaching labels, and as cement for repairing all articles made from celluloid.

Old photographic film from which the emulsion has been removed by soaking in warm caustic solution and through washing in water is a good form of celluloid for the purpose.—*Chemist Analyst*.

FIRST ENZYME ISOLATED BY CORNELL CHEMIST

The isolation and crystallization of the first enzyme has been achieved by Dr. James B. Sumner, assistant professor of biological chemistry at the Cornell Medical College. Success came only after a period of research covering nearly nine years. During a part of the time Dr. Sumner was assisted by Dr. Viola A. Graham and by Dr. Charles V. Noback.

The enzyme isolated is known as urease, and occurs in the jack bean, in the soy bean and in a great many kinds of bacteria. It has been found in the horseshoe crab and in the lining of the stomach. Urease is important in the cycle of nitrogen because it converts the urea that is produced by animals into am-

(Continued on Page 31)

RESIDUUM

PUSHING OR CHEEKY, WHICH?

Several friends were walking on a rather crowded thoroughfare when a young man pushed his way through and briskly moved ahead. "Wasn't he cheeky, elbowing his way between us that way?" remarked one.

"Oh, I don't know; I imagine he is just a pushing young man," analyzed another. Which started a discussion. The conclusion reached by these business men was that it is important for a young man to be full of go and energy and push, but that he hurts himself if his forcefulness gives others the impression that he is cheeky. It was agreed, too, that anyone who behaves brusquely or in any way rudely in a crowd of strangers is likely to act similarly when making business contacts. One veteran declared most emphatically that he had no use for anyone who is obsequious when he thinks obsequiousness politic but boorish when dealing with underlings, because, he emphasized, the two invariably go together.

In getting ahead, don't elbow others out of the way. Pushing must be done politely. Then others will get behind you, not in front of you.—*Forbes*.

Watch the snorting tugs take one of the big ships out into the stream.

Sometimes it's a tough job. When the tide is running strong the liner will drop down the river stern first before the tugs can catch her. She moves with imponderable force.

But the tugs know their business. A couple of them hustle around aft and push their noses against the giant's stern. Another takes a line from the starboard quarter and puffs industriously toward midstream. Soon the headlong dash is checked, and as the current catches the monster's nose, she pivots around on her heels and heads downstream.

The tugboat looks pretty small beside an ocean liner. It can handle the bigger ship because it has sense enough to step back, see where she's heading, then pick the right spot to take hold. That is where the pressure is applied.

There's a lot in tackling a job right.—*The Lamp*.

Every person is responsible for all the good within the scope of his abilities, and for no more, and none can tell whose sphere is the largest.—*Gail Hamilton*.

Education raises persons above their surroundings and makes them masters of themselves, rather than merely being creatures of circumstances. It is not enough merely to know how to get a living, it is necessary to know how to live.—*Calvin Coolidge*.

I. What kind of medicine does the iceman take?

U. Pond's Extract.

PATHOLOGY INSTITUTE NEARLY FINISHED

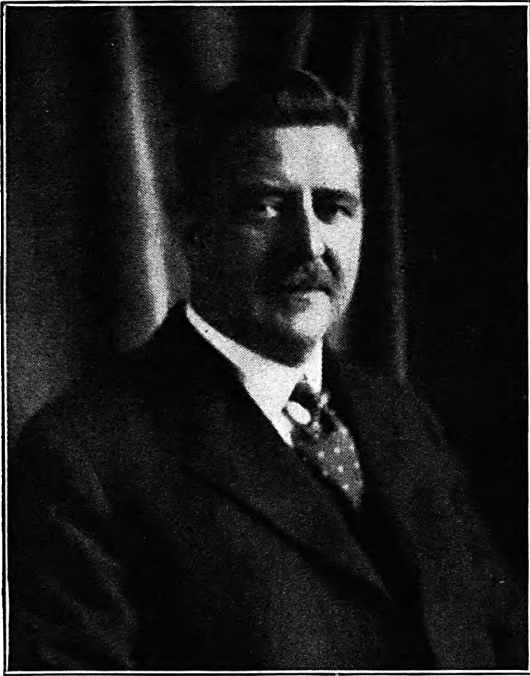
The new Institute of Pathology of Western Reserve University, for which \$750,000 was subscribed by the general education board of the Rockefeller foundation will be ready for occupancy early this summer.

The institute, situated on Adelbert Road between the School of Medicine and the site of Lakeside Hospital, will be connected with the hospital by arcades on the first and second floors. It will take all work in pathology from the School of Medicine, will analyze pathological material for the university hospitals and carry on research in the treatment of disease.

The building is 160 feet long and 58 feet wide. It will include a basement housing an ampitheater with seats for 152, and extending through the first floor. The balance of the first floor will be used for student laboratories and locker rooms. The second floor will be made up of record rooms and offices. The third and fourth floors for hospital work and research, and the fifth floor for experimental research.

The building is constructed of buff brick and limestone, and while built for service, also is replete with decorations symbolic of the history and tradition of pathology. On the outer walls of the building are four copper panels representing Italy, England, Scotland, Belgium and Germany and showing the rise of pathology from the time it was affiliated with the barber's guild.

IN MEMORIAM



CHARLES F. STREICH

Charles F. Streich was born in Dayton, Ohio, on December 23, 1873, and died on March 13, 1929, at his Cleveland residence, after an illness of about one year. His widow, Alma, survives him.

Mr. Streich learned the Drug trade in the store of his older brother, Philip M. Streich, a druggist of Portsmouth, Ohio. He graduated from the Cincinnati College of Pharmacy in 1894. On coming to Cleveland after his graduation, for ten years he managed the Bechberger Pharmacy, owned by his widowed sister, Elizabeth, and located at the corner of Hough Avenue and East 55th Street. He and his brother, George A. Streich, operated this store for the next five years under the name of The Streich Brothers Pharmacy.

In 1909 he opened a pharmacy at the corner of Euclid Avenue and Mayfield Road. In 1925 it was moved across the street into the Commodore Apartment building, where it was located at the time of his death, one of the finest privately owned pharmacies in the city of Cleveland, and a monument to his business ability.

Although taken by death at just past fifty-five years of age, Mr. Streich leaves a record that is enviable. His drug business was always conducted on the highest plane of ethics, and his attitude toward both business and life was one of uncompromising integrity.

Charles F. Streich was an ideal druggist for a college center. His store, located in the neighborhood of Case, Adelbert, and the College for Women, was known to a host of students. He was a friend to all and a counsellor to many, and numerous young men were aided by him to go through college. His character was first recognized by the College for Women when it approved of his pharmacy as having an atmosphere proper for its students.

Charles F. Streich was a community asset and few men have died leaving so much of good and so little of ill repute behind them.

G. A. W.

JOSEPH N. FITZGERALD

As the dawning light of the early morn of eighth of February slowly raised the shades of silent night, there passed from our midst, the soul of one called to his eternal reward.

Joseph N. Fitzgerald was born in Painesville, Ohio, in 1899. He attended St. Mary's Parochial School and Painesville High School. He chose pharmacy as his profession, and in 1920 entered Western Reserve University. After graduation he returned to his home town to serve his apprenticeship. Three years later he established a business at Fairport Harbor, Ohio, where he prospered until two years ago.

Into the southwest he went, seeking good health—only to seek in vain. He was hurried back to Cleveland and died at St. Alexis Hospital.

Engrossed, while in health, in the service of his fellowmen, he nevertheless found time to devote himself to the activities of the Knights of Columbus, Elks, and to spread the spirit of loyalty and fellowship of the fraternity—Kappa Psi.

No task was too great to attempt, no favor too small or too large to grant those whom he knew. A man of sterling character, friend of all. The memory of "Fitz" is forever enshrined in the hearts of all.

F R A T E R N A L

KAPPA PSI NEWS

The February initiation swelled the ranks of the active chapter of Beta Beta by eight new men, in addition to the enrollment of two new graduate members, Mr. Robert Stockhaus and Mr. Otto Rehburg. The eight new actives are: Brothers Schweickardt, Lager, Rehburg, Hoefer, S. Novatny, Viglas, McArtor and Lauria. In consequence of this large initiation, things look promising for next year—we should have about twenty actives in school next fall.

The annual election of officers also took place in February. Those now in office are:

Harry Valway, Regent
E. Whittaker, Vice Regent
Robert Fitch, Treasurer
A. Celke, Secretary
Russell McArtor, Historian
Roger Lager, Chaplain
O. Wolfert, Editor of the Beta Gram

On March twenty-second the chapter held a House Party. Pete Nesi furnished his usual brand of good music to the delight of all the dancers, including Mr. and Mrs. Spease, Mr. and Mrs. Hosler and Dr. and Mrs. Bacon. The downstairs was rid of all furniture and decorated in purple and white, making a pleasing little dance floor. Punch was served to the couples during the evening.

Brother Les Hunt is now in charge of the large, new Marshall Drug Store, just recently opened in Bedford, Ohio.

Brother Hayes Heter is the proud father of a baby boy, according to the Clyde Enterprise.

Brother Gus Olsen is now owner of the Park Drug Co., of Burton, Ohio. Gus is quite a political leader we are told. Looks more like Paul Whiteman than ever.

Brother Bill Duchac is doing nicely in his store in Middlefield, Ohio.

Brother O. T. Carner will soon assume new duties as assistant purchasing agent for the University. We wish him the best of luck in his new undertaking. Brother Carner has been serving as assistant pharmacist at Lakeside Hospital.

PHI DELTA CHI NEWS

The twenty-ninth annual Grand Council of Phi Delta Chi came to a close on February 16, at Hotel Brown, Louisville, Kentucky. Brother Donald Kessler was delegate from Alpha Alpha chapter and brought a very commendable report of the proceedings of the convention. The fraternity has been very progressive in the past year in many ways, including the installation of two new chapters, one in Pocatello, Idaho, and one in Detroit. The past grand officers were re-elected and under this able guidance, the fraternity is looking forward to another prosperous year.

On February 27 and 28 and March 1, three neophytes trod the hot sands and entered the mysterious realms of Phi Delta Chi. They are Kenneth Lautenschlager, Edwin Miller and Fernau Bader. A banquet followed the formal initiation at the chapter house in honor of the new initiates, and a representative number of the alumni were present.

On March 15, Alpha Alpha alumni and actives were the guests of last semester's pledge organization at a smoker given at the chapter house. A committee composed of Brothers Bader, Miller and Lautenschlager and Pledge Pumphrey are to be praised for the good work as waiters and entertainers. The chapter certainly appreciated their efforts and also the eats they supplied.

On May 3, Alpha Alpha will hold its annual spring dance at the Hotel Westlake. All arrangements have been completed by a committee composed of Brother Baldinger as chairman and Brothers Patronskey and Cantlon. They have spent a great deal of time in preparation and we are looking forward to an enjoyable evening.

Brother Baldinger has recently accepted a position as instructor in the College of Pharmacy at Notre Dame. Brother Baldinger will graduate this June with a B. S. degree and will take up his duties at Notre Dame in September of this year. We congratulate him and wish him much success in his new undertaking.

ALPHA ZETA OMEGA NEWS

The most important of the social affairs given by the A Z O fraternity was a formal dinner dance held at the Oakwood Country Club, March twenty-fourth. This was given in honor of the new men just initiated. Men so honored were Sam Cohen, Joe Dworkin, Joe Eisenberg and Max Reimer.

This affair was considered by everyone as the best which we have ever had and its success may be laid to Abe Amster, chairman of the committee. Entertainment was supplied by Hi Gerson with his splendid imitation of Al Jolson. To every one's pleasure little Sammy Cohen proved to be a second Tom Patricola.

The series of lectures which were started last year have continued with Phil Hieberman in charge. Amongst some of those heard were "That Man Heine" by Maurice Klein and "Heywood Broun" by Jack Baskind. For the future a mock trial is being planned which from its advance publicity, promises to be one of the best entertainments we have had.

The first engagement of the past year was that of Jack Franklin to Lena Sandin. Not to be outdone the Baskin-Weinberg Drug did likewise in true partnership style. Max's engagement to Rose Axelrod was followed by Jack's to Lillian Sandugor.

Everybody is betting on who will be next. Dave Cowan and Matyas are possibilities.

Max Cohen is attending medical school at Baltimore this year.

The whole chapter is looking forward to the convention to be held in New York this July. Since most all of the boys have new cars the possibility of everybody driving down is very good.

Millard Berger came up from Akron in his new Peerless to help represent Theta at the Adelbert Junior Prom. It was a good chance to visit Wargell.

KAPPA EPSILON NEWS

Spring with its blue skies, blossoming trees and balmy weather, seems to be an ideal time to idle and dream away. It is at this time that the professors find it necessary to impress upon the students the penalty of over-cutting and the disastrous results of "putting off today what you can do tomorrow." Spring also ushers in a season of parties and proms to break the strain of midsemester examinations.

Kappa Epsilon finds its first spring an exceptionally busy one. Miss Emma Pejsa was sent as its first representative to the annual convention held in Lincoln, Neb., on April fifth and sixth.

On Friday, April the twelfth, a spring dance was held in Adelbert Hall. With utmost diplomacy the decoration committee informed the professors that classes would have to be held elsewhere. Supplied with nails, hammer, wire and crepe paper, they proceeded to transform the bare yellow walls and ceilings into a bower of delicate green, orchid and yellow. But it was not until Ruth Kotershall decorated each post, doorway, rostrum and fount with crepe paper bows that the work was considered finished. Ten o'clock found the dance in full sway. Pete Nesi's orchestra supplied the music. The Pharmacognosy Laboratory became a refuge for hungry and thirsty dancers. The dance on the whole was considered a success, for a number who had planned to leave early in order to study for a Quant Exam, did not leave until the orchestra struck up the strains of the Home Waltz.

Miss Gertrude Horsch, who is attending the University of Michigan, spent the spring vacation with her parents.

The annual spring formal is to be held on Friday, May the seventeenth. Definite plans have not as yet been made.

ALUMNI NOTICE!

To the Alumni:

Your officers, acting as a committee on entertainment, are making a great effort to have a real Banquet this June. To gain this end we have obtained the Acacia Country Club.

The Acacia Club is located on Cedar Road, just beyond Richmond Road, and is accessible from downtown Cleveland through Carnegie Avenue, up Cedar Hill, and straight out Cedar Road. From Akron and its surrounding territory, the Club may be reached by turning right, just a short distance, at SOM Center Road and Cedar. From East Cleveland, and points east, (Ashtabula, etc.) Noble and Taylor Roads lead directly to Cedar, and the Club is then just a short distance from the junction with Cedar, and to the left.

(Continued on Page 31)

EXPRESSED OIL

THE CHEMICAL WEDDING

One of the most delightful and prepossessing events of the season took place when Miss Io Dine, one of the most charming of the Halogen sisters, entered into a union with Ben Zene, one of the distinguished Hydrocarbons. The wedding march was effectively rendered on the blow-pipe by the accomplished young organist, Miss Molly Cule. The Bridal party appeared, led by the youthful ushers, Cy Anogen and Peter Oleum, and the bridesmaids, Ethyl Alcohol and Molly B. Date.

The bride, charmingly veiled in a wire gauze, carrying a beautiful bouquet of Flowers of Sulphur tied with a Magnesium ribbon, entered on the arm of her father, I. O. Dide. At the same time the groom, with his best man, Nickelous Hydroxide, came down the aisle and met the bride by the mortar where by the soft light of the Bunsen Burner, a short but impressive service was held by the Rev. Bro. M. O. Seltzer.

—Rex Ray.—S. C.

Now here lies the body of Harry McMines,
Who never placed credence in R. R. signs.
He's a dairyman now on the old Milky Way,
And each early morn in the gray light of day

He earnestly peers thru the Heavenly fog
For the "Stop, Look and Listen"—slows his horse to a jog.

For if ever he hits the Celestial Express
His next stop would hardly be Heaven,
we guess.—*The Wheel.*

I envy thee, little lightning bug,
You worry not a bit,
For when you see a traffic cop,
You know your tail light's lit.

Patron: "Here's a piece of rubber tire in my hash!"

Waiter: "No doubt. The motor is displacing the horse everywhere."

—*Detroit Motor News.*

A college education fits one for a position
but ruins him for a job.

Life is like a cup of tea; the more heartily
we drink the sooner we reach the dregs.

He—"Why does a woman always take the name of the man she marries?"

Him—"Because it is the law, I suppose."

He—"No, they knew she would take everything else so she might as well have that too."

Lil—"Arthur, dear, the doctor says I need a change of climate."

Art—"All right; the weatherman says it will be cooler tomorrow."

"Are you the doctor?" she asked the young man who runs the soda fountain.

"No, Madam," he replied, "I'm a fizzician."

Gyer—"What are you working at now?"

Myer—"I'm a diamond cutter."

Gyer—"How's that?"

Myer—"I cut the grass at the baseball grounds."

DON'T!

Don't! Tell the judge when arrested for speeding, that you were going for a doctor. He might be a Christian Scientist.

Don't! Eat loaf sugar; it might make you lazy.

Don't! Think a lady young if she tells you she has seen only eighteen summers. She may be near-sighted.

Don't! Call your dog "Ink" just because he runs out of the pen.

Don't! Tell a customer that the Mayflower compact is a Djer-Kiss product.

SOMETIMES

"What's the highest grade in the regiment?" asked the corporal of the rookie.

"The colonel."

"And what is just below him?"

"His horse."

HIS MINORITY

"Before you were a farmer, what did you do?"

"I was a miner."

"How long were you a minor?"

"Till I was twenty-one."

DURN IT ALL!

Where kin a lad buy a cap for his knee?
 Or a key to the lock of his hair?
 Kin his eyes be called an academy
 On account of they's pupils there?
 In the crown o' his head, what
 Jools are found?
 Who crosses the bridge of his nose?
 Kin he use when shingling the roof of his
 house
 The nails on the ends of his toes?
 Kin the crook o' his elbow be sent to jail?
 If so, what kin he do?
 How do he sharpen his shoulder blades?
 Oh, no, I don't know, do you?
 Kin he set in the shade of the palm of his
 hand?
 Or beat on the drum of his ear
 Does the calf o' his leg
 Eat the corn on his toes?
 If so, why not grow corn on the ear?
 —*Wroe's Writings.*

"Is your kitchen small?"

"Is it? Why, it's so small we have to use
 condensed milk."

He—"This dining-room table goes back
 to Louis XIV."

He—"That's nothing. My whole sitting-
 room set goes back to Sears-Roebuck on the
 fifteenth."

—*Drug Bulletin.*

ENZYME ISOLATED

(Continued from Page 25)

monium carbonate, which is used by the
 plant, usually after conversion to nitrates by
 bacteria.

Chemists have been attempting to purify
 enzymes for nearly a century, but up to the
 time of Dr. Sumner's discovery no enzyme
 had ever been prepared in pure condition, and
 the chemical nature of enzymes was entirely
 unknown. Indeed, a prominent worker in
 this field, Dr. Richard Willstatter of Ger-
 many, recently declared that the enzymes be-
 long to no known group of chemical sub-
 stances.

An enzyme is a substance elaborated by
 plants, animals, or micro-organisms that ac-
 celerate chemical reactions without itself
 being used up in the process. In other words,
 an enzyme is a catalyst. But the enzyme is a

catalyst of a special sort. It is extremely
 unstable and of colloidal nature. These are
 the chief reasons why the isolation of an en-
 zyme has been considered an almost impos-
 sible task. Enzymes are sometimes called
 ferments because they cause fermentations.
 Of the great number of enzymes found in
 living cells a few examples are: Zymase,
 which is present in yeast and which is re-
 sponsible for the alcoholic fermentation of
 saccharine liquids; rennin, which is obtained
 from the stomachs of calves and which is
 used in the manufacture of cheese; pepsin,
 which is present in the gastric juice and
 which digests meat; and thrombin, which is
 necessary for the coagulation of blood.

Urease has been prepared by Dr. Sumner
 as octahedral crystals that are slightly larger
 in diameter than human red blood corpuscles.
 The crystals are protein and belong to the
 class known as globulins. They are able to
 transform their own weight of urea into am-
 monium carbonate every 1.4 seconds at room
 temperature.

The isolation of urease has opened up new
 fields for research and is expected to aid in
 the solution of many problems of the chemis-
 try of enzymes and to lead to the isolation
 of still other enzymes.—*Science Service.*

ALUMNI NOTICE


(Continued from Page 29)

We shall have the use of the entire Club,
 including the large, well-lighted, free park-
 ing space. The beautiful long and spa-
 cious ladies' and gentlemen's rooms, and the
 wide veranda, all point toward a perfect
 setting. If it should be hot in the city, this
 will provide a delightful retreat.

Dr. P. G. Albrecht, former Chemistry
 Professor, is anxious to see the "boys" of
 '14 to '17. The Class of '19 will hold its
 Tenth Reunion, etc., so let's all plan to be
 there.

Don't forget—Wednesday Evening, June
 12th—6:45 P. M.—\$3.00 per plate. Good
 music, and the old gang will be there.

When you receive your tickets by mail, or
 some one calls on you, please give us the
 certainty of financial success by "coming
 across". There is just one event on June
 12th for good Alumni! Be there. William
 W. Hosler, President; Paul R. Hudson,
 Vice-President; Louis Gressel, Secretary;
 and Walter F. Wargell, Treasurer.



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The Pharmacon

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The Rescued Pharmakon

Vol. 3 June, 1929 No. 3



What every newly "College Graduated" Student thinks ~ ~ ~ ~ ~

V. STARK
1929

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CLEVELAND, OHIO

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A Publication Dedicated to Professional Pharmacy

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VOL. 3

WESTERN RESERVE SCHOOL OF PHARMACY
CLEVELAND, OHIO.


JUNE 1929

No. 3

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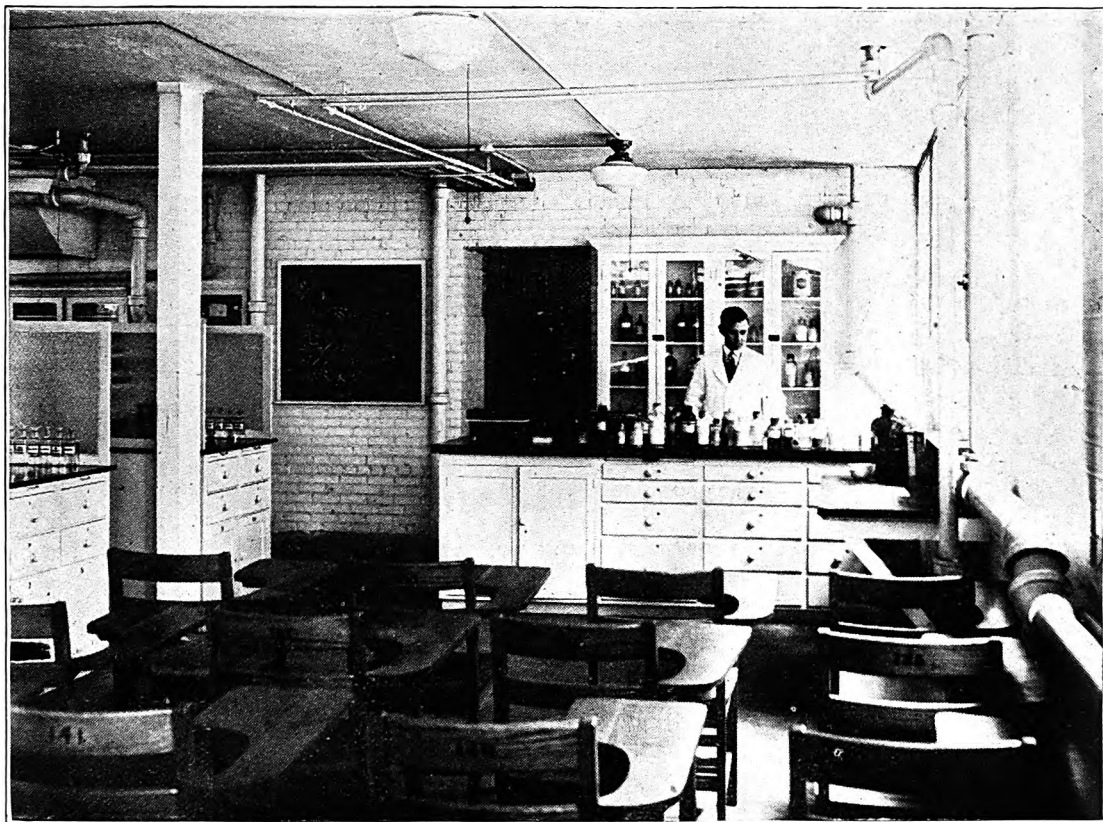
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THE PRESCRIPTION LABORATORY

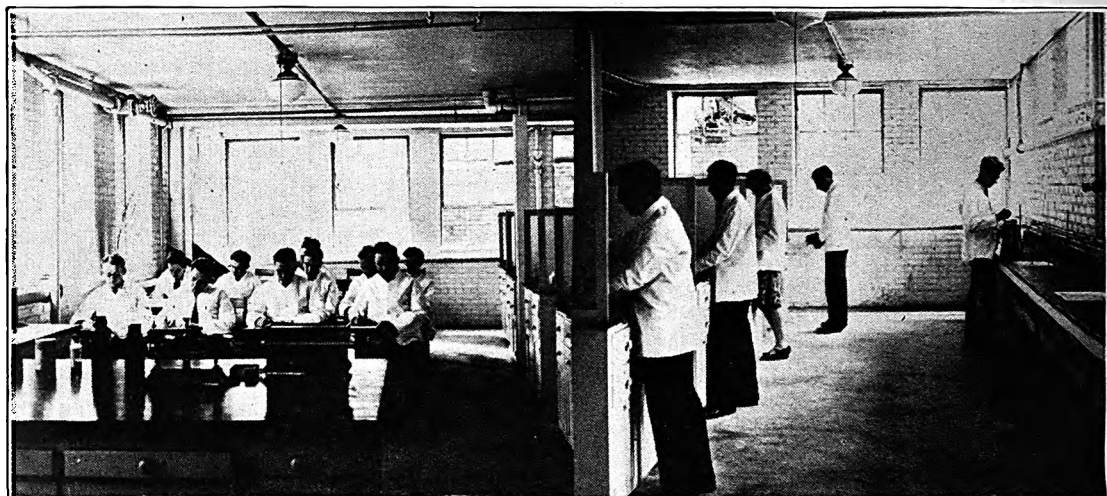


Demonstration table and entrance, as viewed from the rear of the laboratory.

It is frequently claimed that the trend of modern medical practice precludes the writing of prescriptions; that those being written are mere orders for stock which may be made to advantage by the large pharmaceutical manufacturers and dispensed by the druggist like any usual kind of merchandise. It is not the purpose of this brief article to refute the claim by marshalling arguments to the contrary, except to observe that never in the history of medicine and pharmacy was there a time when more prescriptions were written in proportion to the bona fide pharmaceutical practice carried on. The fact that a huge amount of merchandising has been corralled into the retail drug field is, too frequently, not taken into account. For the most, we believe, reputable and prosperous physicians do

write prescriptions and if there is a tendency of these same physicians to confine their prescriptions to the manufactured and packaged preparations of the large pharmaceutical houses, it is, to some extent, due to the fact that the present-day compounding prescriptionist fails to measure up to the opportunities offered him in the art and science of extemporaneous pharmacy. We are not over-looking the fact that the modern industrial sciences have brought into being numerous remedial agents such as the organic synthetics and biological products which must of necessity be made and packaged by the producer under specific conditions. Too frequently, however, because of lack of pride in his art and ingeniousness in his technique, the pharmacist unwittingly encourages the physician to lean on the con-

THE PHARMACEUTICAL RESERVE



(Left)—Seating arrangement in front of the demonstration table, as viewed from the entrance. (Right)—Rear corner view, showing arrangement of sinks along side of laboratory opposite to seating side.

trol laboratory of the large manufacturers for both exactness and elegance.

To some extent, it seems, Pharmacy Colleges and Boards have contributed to this delinquency so often prevalent behind the prescription counter. Many pharmacists who uphold the tenets of professional pharmacy often neglect the importance of its extemporaneous side. Until the last few years very few of the colleges paid much attention to it by way of providing special laboratory facilities for training in the art of compounding—a real art based on a knowledge of scientific principles—and prescription practice. Even now the Pharmacy Boards minimize this particular phase of pharmacy, seemingly overlooking the fact that the Boards were created solely to protect the public from incompetent and hare-brained practitioners. If the real art of compounding is neglected, is the public protected? A candidate for registration may know considerable chemistry, botany, materia medica, toxicology, posology, etc.; he may know a lot of isolated facts pertaining to general pharmacy; he may know the quiz compends from cover to cover and still be unable to interpret and correlate that knowledge so as to intelligently apply it to a simple problem arising from an incompatible prescription.

It appears that no better method offers itself to the Boards for finding out what a candidate's real capabilities are, when confronted with problems involving the public safety, than to submit to him, along with more practical work, questions typical of those to be found in any standard work on the art of compounding. It would make for safer pharmacy and more elegant pharmacy, both of which are especially claimed assets of the pharmaceutical houses. While it is highly desirable that the quiz compend type of question, which tests only the candidate's superficial knowledge of the basic sciences, should be replaced by questions so framed as to bring out the candidate's real understanding of the subjects, we must not lose sight of the fact that expert chemists, botanists and similar specialists usually lack pharmaceutical background so that high proficiency in such subjects does not necessarily fit one to interpret the needs and ideals of the pharmaceutical profession. In view of this, where will one, may we ask, find a particular phase of pharmacy better suited to test out both the basic sciences and the particular needs and ideals than in the art of extemporaneous compounding?

Western Reserve School of Pharmacy hastened to remedy its own shortcomings with respect to the teaching of extempor-

THE PHARMACEUTICAL RESERVE

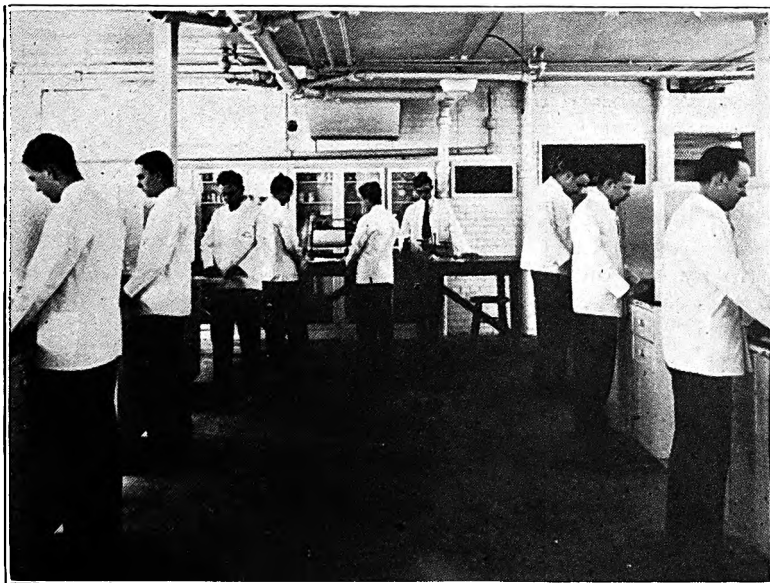


Close-up view of individual work table for two students, each working in separate sections.

aneous compounding just as soon as housing facilities were provided. Until the Fall of 1928 we were obliged to run our prescription laboratory in conjunction with our operative pharmacy laboratory. This was a serious handicap. Not only was our work slowed up but the proper class spirit could not be maintained under conditions so far removed from the ideals held up to the class in lecture and quiz room instruction. With the raising and remodeling of our laboratory building we were provided with a room 40 by 40 feet with plenty of window space on three sides. The ceiling, walls and piping are painted white, which, with an excellent artificial lighting system, gives us plenty of light when and where it is needed under all conditions. The commodious room is so arranged that a laboratory section may be seated at the pleasure of the instructor, in front of the demonstration table. This arrangement facilitates practicable instruction in ways that are obvious. Twenty individual prescription desks provided with a double set of compartments provide for two laboratory sections of twenty students each. Each desk is provided with 82 stock containers, a first-class prescription balance and the usual equipment provided for such work. Sinks, cupboards for extra stock and containers, drawers for equipment, wrapping and utility table, etc.,

are convenient and serviceable. On the whole, it will be observed, the room is spacious and cheerful, the facilities and equipment ample and the general surroundings tend toward more individual effort and better morale among the student-body.

N. T. C.



Middle aisle of laboratory, viewed from the rear.

THE PHARMACEUTICAL RESERVE



A Section of the Research Laboratory, Parke-Davis Co.

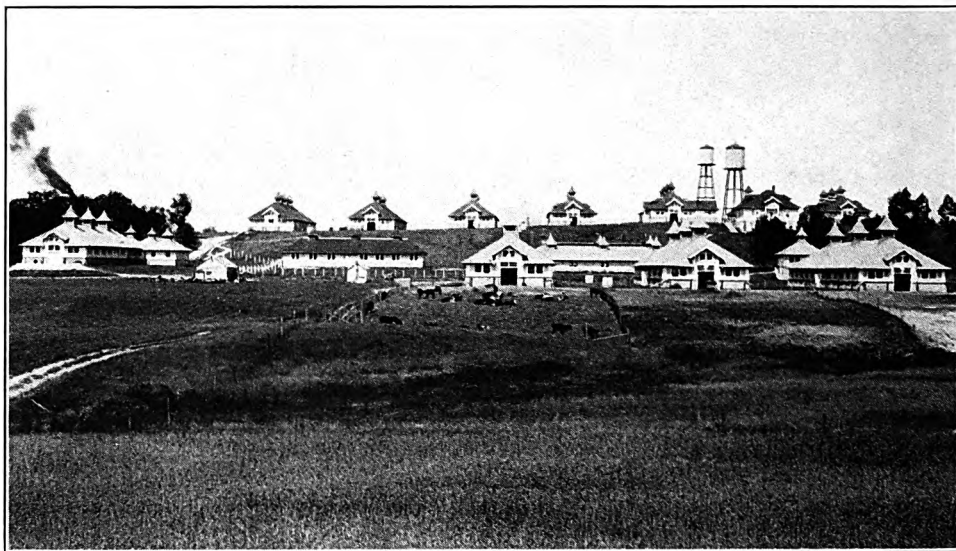
At the time we realized the last word in hospitality and good times. We had busses at our service. We danced with the pretty girl employees during the lunch hour, and that's no small favor. The breakfast and lunch were plentiful and entirely pleasing. And oh, that dinner at the Statler Hotel in the evening! We ate chicken; we sang at the tops of our voices; we (and in particu-

lar the bashful boys) encored the fine entertainment. Finally we complacently listened to Parke-Davis officials trying to convince us that we were doing them a favor!

Compulsory? Yes, but if our Dean wishes that we stay at home when the next Parke-Davis trip rolls around, he'll have to make that compulsory!



Ampoule Department, Parke-Davis Co.



Biological Farm, Parke, Davis and Company, Situated Near Rochester, Mich.

MOSQUITOES CARRY MALARIA

Most of our malaria in the United States is conveyed by *Anopheles quadrimaculatus*. This mosquito very rarely bites in the full sunlight and does not like bright lights. It is a night feeder, but will at times attack man in houses in the daytime. When it bites us at our homes, in most instances it rests on the walls of the room where it took its blood meal and remains there quietly for a day. Occasionally some of them go into an adjacent room. After taking the blood meal this particular mosquito appears to be more sluggish, and is not as easily alarmed as are some other kind of mosquitoes. It is relatively easy to destroy, and children, after a few trials, are soon able to find all mosquitoes resting on the walls. On rough, wooden walls the resting *Anopheles* look like wooden splinters that stand out from the flat surface. It is possible for the children in the farm-tenant homes to learn how to find and destroy every *Anopheles* in the room, and they enjoy doing it.

If these mosquitoes on the walls are destroyed at a definite hour each morning, then malaria transmissions will practically be prevented in that home. There are many localities in which malaria prevalence is of

considerable economic importance where eradication of *Anopheles* by drainage may not be undertaken in the near future, and where the farm-tenants cannot screen their homes. In such places this control method can be used to advantage.—*Public Health Reports*.

A NEWLY-DISCOVERED CAUSE OF BERIBERI

A new view of the cause of beriberi has been published by Prof. Matsumura of the Chinese Imperial University. This disease of the nervous system has been regarded as a deficiency disease due to the lack of vitamin B in the diet. It affects chiefly those whose diet has consisted largely of polished rice, and has been cured by the administration of whole or brown rice from which the outer coating has not been removed. In making researches upon the effect of poor nutrition on the intestinal bacilli, Prof. Matsumura found a special bacillus in the intestines of birds fed on polished rice only. This bacillus was cultivated artificially and was found to be the cause of beriberi, by which disease the birds were attacked after they had been weakened as a result of poor nutrition. The bacillus has been named, *Chiba beriberi bacillus*.—*Good Health*.

THE SQUIRE BOTANICAL GARDENS

By Leroy D. Edwards, Demonstrator in Pharmacognosy

To teach Botany is one thing, but to enable your student to sense the true value of nature—to appreciate the true beauty of plants—is another. Such an understanding cannot come from books and lectures, but rather it appears to be developed by the practical application of book knowledge in the field. And by field work one implies work in the greenhouse, cultivation of plants, and a comprehensive study of all phases of flower, tree, and shrub life. After one has mastered a subject he can derive from that knowledge an inexplicable and ever-lasting pleasure. Such is the hope of the Botany Staff at Western Reserve, and we believe, in all modesty, that this hope is on the way to realization.

We have introduced new courses in our Botany Curriculum; we have witnessed the erection of a modern greenhouse on the campus; and above all, we have been granted the use of The Squire Botanical Gardens for the establishment of a drug garden, botanical garden, and for field work in general. This tract of land—three hundred and sixty acres—is pleasingly rolling; thus providing the necessary ravines, hillsides, lowlands, and highlands for the study of nature in all its aspects. One wooded section is given over to natural plant and animal life—another section of this type is under semi-cultivation. Here we find the arboretum with its innumerable exotic and indigenous trees, shrubs, and flowers. A lazy, little stream dammed here and there to form miniature lakes and long winding cork bark paths make this a very delightful spot. From the highlands there is a view of the surrounding landscape for a distance of twenty-five to thirty miles. It is, if we may use the expression, a rhapsody in nature. Could one ask for more?

If through the use of these Gardens our students can learn to know and to esteem nature in all its glory—so nicely expressed in the following description of Kew in Bluebell Time—our efforts will be crowned with a success uncommon to that achieved in the pursual of any other study.

Kew In Bluebell Time

I have seen the moon rise up over the Nile, starlight in the silence of the desert, the strong sun lying over the flat African roofs, and many times from the summit of cold mountains I have watched dawn come slowly. But Kew Gardens in Bluebell Time—

Travel the world, spend a fortune hunting beauty, yet I do not think the earth will give you a lovelier sight than the Bluebell Walk in the freshness of morning. It is Bluebell Sunday, the papers remind you; and so, with a Sabbath hush over the streets of London, you take the Underground to Kew and pass in to a paradise of shaven lawns and fresh green trees. What peace! The sounds we townsmen live with, cease. The air is full of small winged noises and the bushes are alive with sudden rustlings. Through the sunlit morning, like a pattern in gold brocade, runs a constant trickle of bird song, from tree to tree, song and reply, thrush to thrush, blackbird to blackbird—

Happiness is in the air, the warm contentment of natural living things. —On a still lake a swan moves, a silver line lengthening behind her as she swims; a small red-billed bird seems to propel herself through the water with much nodding of an ebony head; two yellow butterflies flicker above a flower—

Bluebell walk—

On either side of a railed path is a lake of blue lying under the dappled cool tunnel of tall trees. It is overpowering in its beauty. It is a kneehigh mist of blue. In certain lights there is an optical illusion of a haze above the mist. The millions of tiny bells lie massed together, following the lay of the land, barred with sunlight that falls through the leaves above, in a shadow dark, in light startlingly blue, like wistaria.

Unforgettably English—H. V. Morton, in *The London Year: A Book of Many Moods*.

SPORTS

MYER L. KARNER

Pharmacy Ends Season with Mediocre Showing

The "Green Tornadoes" lost their zip this season. They played only five hundred per cent ball throughout. This was due to the fact that only five men played. It seems that there is a lack of enthusiasm present in the student body. There were no spectators present at games, to say nothing of the shortage of players.

With only Captain Karner left from the last year's championship team, it was difficult to work up a smooth-running combination. The rest of the team was composed of Kaspar, Novatny, Gayok and Steidl. The quintet put up a hard fight, nevertheless. Many times when the team was in the lead it lost out because of a lack of substitutes. The inexperienced new men found it difficult to retain the speed and passwork of last year's combination.

In spite of this rather poor showing, much credit should be given to those five men who thought enough of their school to sacrifice outside activities and working nights to report at the gym so that Pharmacy school could at least be represented. They certainly deserve the sweaters which the student council awards annually.

In reviewing the work of the past season we might say that there were no luminaries on the team. Even though the men had difficult situations to buck up against, there were no arguments. The boys played to the best of their ability and encouraged one another at all times. In the face of reverses there was always harmony and sportsmanship.

With Karner and Gayok at forwards, Novatny at center, and Kaspar and Steidl at guards, the team fought desperately. Novatny played throughout the season with a sprained ankle and he certainly deserves praise for his grit. Steidl, in spite of his inexperience, was responsible for some fine back-court playing. Kaspar, a freshman, displayed a good game of floorwork and was

a quiet, hard-fighting, never-say-die player.

Gayok was in the midst of the fight at all times. He did more running and fighting than any man on the squad. Karner's shooting ability kept the team in the running. Time and again he registered difficult shots from all angles of the floor and led the team in scoring.

In comparing this year's team with the preceding one, we see an overwhelming margin in favor of the latter. That memorable trio of Stockhaus, Nagy, and Karner was unbeatable. They were the smoothest-running and highest score-registering outfit in the history of the School. Their offensive work was reinforced by the stellar guarding of Scott and Valway. The latter two were seldom scored upon and never outplayed.

With only Kaspar left to build a team next year, due to the graduation of Steidl, Gayok, Novatny, and Karner, we sincerely hope that enough enthusiasm will be shown to have a team. In addition we hope that the student body will show enough interest in its team to root for the boys playing. Let's get some spirit into the student body. In a professional school it seems that everybody is always too busy to enjoy an evening of recreation. Let's forget work for a few evenings during the year. We owe it to ourselves and to our School. Besides, it will liven you up and put pep into you. As Nat Holman, the great basketball player, once said: "It's the spice of life." So, phar-mics, let's forget the past season and make the next one a bigger and better one!

BOXING

Remember the notice which read, "Intramural Boxing and Wrestling, entries close February 19th?" Well, you can be sure that Joe Eisenberg remembers it. Joe was the only contestant in boxing who entered from the School of Pharmacy and not only made out fairly well but was expected to win the 135 pound class championship.

Joe fought his first fight with Bill Leckie and won by a decision. Those who saw the fight scorned Joe for taking too much pity on Bill. Then came the second fight with Biegelson. This was not much of a fight for the Pharmacist, since he scored a technical knockout in the first part of the second round.

When Intramural Night drew near, the pill peddler was staged to fight Tony Disantis. Nervous as he was he put up a good fight but due to non-aggressiveness in the fourth round the fight went to the "pug" from Adelbert. The Disantis-Eisenberg fight was the fastest go of the evening, being called a draw at the end of the third round and then the fight going to Disantis at the end of the fourth by decision.

"Wait 'til next year", says Joe, "I'll train during the summer and perhaps the Pharmacy School will claim a pugilist."

THE SCHOOL DANCE

According to the established custom, the Student Council presented the school with its crowning achievement of the year on the night of the opening of the second term, February the fourth. They unveiled their "monument" at the Hotel Cleveland in the Georgian Room. They do things in a big way, these boys of the Student Council, and so they picked out the biggest and the best hotel in Cleveland to stage their affair. Then, too, in selecting an orchestra, they picked on real class—The Original Rhythm Serenaders of the Buckeye State. I'm not quite sure of the name, but I do mean that it was our own Pete Nesi and His Gang.

And did we have a good time? Just take a look at the happy grin on Dean Spease's perspiring countenance as he goes fox-trotting past. Dr. Bacon and Mr. Hosler and their consorts seem to have heard a lot of jokes lately, they've been enjoyed themselves, so figure out for your self, just how much fun the rest of us had. When it was all over (and not before) everybody went straight home. What I am trying to explain is the fact that it was an enjoyable evening. And for that,—thanks, Student Council.

O. W. WOLFERT.

ALUMNI PERSONALS

Mr. Harry M. Smith, formerly with Miller Brothers, in Cleveland, is now in the Research Department of the G. D. Searle and Company of Chicago.

Mr. Lee Sutter is with Biddle and Newcome at 899 North Howard Street in Akron, Ohio.

Mr. Thomas H. Highland recently passed the State Board Examination and is with the Marshall Drug at Superior and East 105 St.

Mr. Fred H. Bader of Bader's Pharmacy at 4350 Pearl Road is father of Fernau Bader, who is a freshman in the pharmacy school.

Mr. Nelson Scribner is at Streich's Pharmacy at Euclid and Ford Drive.

Mr. Norman E. Smyth is part owner of the Public Drug Company at 1851 East 55 Street.

Mr. Joseph Turk, Jr., is with Marshall's at Mayfield and Superior.

Mr. Fred Neuman is located with Schlach's Drug Store at 428 Market Avenue in Canton, Ohio.

The following is a list of the geographical location of some of our alumni.

Arizona—Mr. Alfred Sobey, R. F. D. Glendale.

California—Mr. Glenn Coleman, 4606 Second Ave., Los Angeles.

Mr. Walter E. Wigley, 336 West 66 Street, Los Angeles.

Florida—Mr. Wm. Emerich, 201 Liberty Street, Orlando.

Illinois—Mr. George Carl, 5430 Bernice Avenue, Chicago.

Mr. Geo. N. Case, 166 N. Curtis Ave., Chicago.

Mr. Albert Knauf, University of Illinois, Urbana.

Indiana—Mr. Ira Stabler, 615 East Main Street, Portland.

Maryland—Mr. Max Cohn, 2901 Reyworth Avenue, Baltimore.

Michigan—Mrs. C. J. Cunningham (nee Irene Albrecht) 12333 Monica Street, Detroit.

Mr. Vladimir Jirasek, Harbor Beach.

Missouri—Mr. Wm. Arscott, 706 Delaware Street, Kansas City.

New York—Mr. Rupert Gibney, 38 Dolbeat St., Perry.

Mr. Louis Palay, Bronx Hospital, Bronx.
Mr. Karl Gerold, 51 Tyler Street, Buffalo.
Mr. Jonah Lipson, 130 Claremont Avenue, Apt. No. 4, New York City.

Mr. Oscar Kimaly, Syracuse University, Syracuse.

Pennsylvania—Mr. Herman Warren, Market and Locust, Johnstown.

West Virginia—Mr. Frederick Herget, Hyland Park.

DID YOU KNOW?

Did you know?

The electric eel, which inhabits South American rivers, sometimes grows to be eight feet long and four-fifths of that is tail.

Did you know?

Joseph Wilson Swan, an Englishman, took out the first patent for making artificial silk in 1883, by squirting a pulp of wood and cotton through small holes.

Did you know?

The first recorded experiment in electricity took place sixty years before the birth of Christ, when the Greek, Thales, of Miletus, rubbed pieces of amber and observed they would attract light objects.

Did you know?

The fastest living thing on legs is said to be the whippet, racing dog. This dog can cover two hundred yards in from ten to twelve seconds, or half the time a man would require.

Did you know?

There are 28 registered nurses in this country for every 100,000 persons.

Husband—"That baby of mine will drive me mad, why it cries nearly all the time."

Another Hus.—"Well, all babies cry; why don't you sing it to sleep?"

Husband—"I have proposed that, but my wife says she'd rather hear the baby cry."

Q. Why is it that widows very seldom have trouble getting married again?

A. Simply that dead men tell no tales.

HERE AND THERE

The Pharmaceutical Journal, British, for January 12, 1929, under the heading, "Books for the Leisure Hour," by R. Cecil Owen, carries quite an interesting review of one of the latest books of Mr. H. G. Wells. The title of the book is "Mr. Bletsworthy on Rampole Island." The thing, however, that is most interesting in this article is the fact that the writer of the article, Mr. Owen, says that he has received a letter from Mr. Wells in which Mr. Wells remarks that "I was once apprentice (on trial, not bound) to a chemist and I've always kept an interest in the life below the colour bottles."

The American Journal of Pharmacy for January, 1929, carries a very interesting article that is too long to be reprinted here and can not be abstracted with any degree of success and so we commend it to our readers, knowing that they all have access to the American Journal of Pharmacy. The article is entitled, "The Pharmacy and Science of Dickens' Writings," by Charles H. LaWall and Millicent R. LaWall. It will be found on page 6 of the Journal and was read before the Dickens Fellowship of Philadelphia on November 21, 1928. Those of you who read Dickens will enjoy this article very much. The writers are Dean and Mrs. Charles H. LaWall of the Philadelphia College of Pharmacy.

In practically all parts of Brazil, the leading pharmacies employ young doctors who give free consultations to the poor. These physicians attend to large numbers of clients and prescribe prepared medicines much more frequently than is the case in the United States. The doctors are sometimes paid a monthly salary but in many cases receive a fixed amount for each prescription, which, of course, is included by the druggist in the price of the remedy sold.—*From U. S. Commerce Reports.*

The SKEPTIC would define the DRUGGIST as a dealer in soda, cigars and postage stamps who, at sight of a prescription, can dump a nickle's worth of stomach insult into a two ounce bottle and palm it off as a 75 cent life preserver.

Faculty





EDWARD SPEASE, B. S., DEAN

Professor of Pharmacy

Much credit must be given to Dean Spease for the time and effort he has spent in improving both the faculty and the equipment of our school. If the dean of every pharmacy school were as particular about who he placed on his teaching staff, the future of our profession would give us no cause for worry.

NEIL T. CHAMBERLIN, B. S., A. B.

Assistant Professor of Pharmacy

"What do we live for, if it is not to make life less difficult for others? must be the belief of Professor Chamberlin. He has never been found too busy to give individual help, or take charge of some student activity. His true worth will never be fully appreciated until he is no longer a member of our faculty.



FRANKLIN J. BACON, Ph. D.

Professor of Pharmacognosy

We wish to take this opportunity to congratulate Dr. Bacon on his good work since coming to Reserve. It took him just one year to prove his ability as a pharmacologist and botanist, having in that short time, risen to be the head of the Botany department of the entire university.





HERMAN P. LANKELMA, Ph. D.

Assistant Professor of Chemistry

Any student who is industrious and makes a sincere effort is always sure of a square deal from Dr. Lankelma. He realizes that his subject, organic chemistry, is hard to master but through his efforts most students succeed in accomplishing what they consider an impossibility in the beginning.

LEONARD G. STEUER, M. D.

Lecturer in Physiology

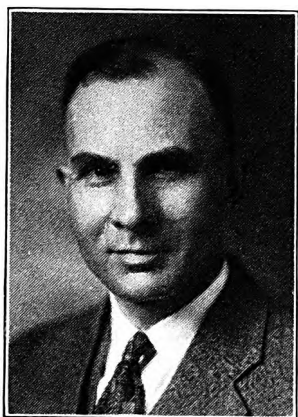
Dr. Steuer, our instructor in physiology, has shown us that it is possible to cover the subject dealing with human anatomy in one year. In a condensed course, such as the one given in pharmacy school, a man must know his subject thoroughly in order to be able to choose the most important phases.



EDWARD D. DAVY, B. S.

Professor of Analytical Pharmacy

The saying, "Still water runs deep," can aptly be applied to Professor Davy. Many students would be surprised to learn that he has done much in the line of research merely to prove to his own satisfaction the constituents of some drug. Saying little but accomplishing a great deal is his hobby.

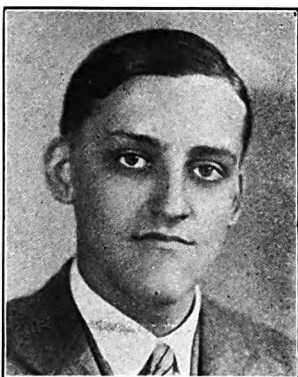


THE PHARMACEUTICAL RESERVE

WILLIAM W. HOSLER, B. S.

Instructor in Pharmacy

Although most of his time is taken up between teaching pharmacy and completing a course in the graduate school, Mr. Hosler manages to find a few moments to devote to athletics. It is mostly through his efforts that the pharmacy school is represented in the intramural and other athletic activities of the university.



ROBERT P. G. STOCKHAUS, B. S.

Demonstrator in Pharmacy

A man of even temperament, that's our pleasant, ever genial Demonstrator in Pharmacy, Robert Stockhaus. Has anyone ever found him too busy to stop and offer his help in the solution of some difficult problem in pharmacy? It will pay those students who do not already know him to visit the manufacturing laboratory and get acquainted.

ADELAIDE EVANS HARRIS, M. A.

(Mrs. R. J.)

Instructor in English

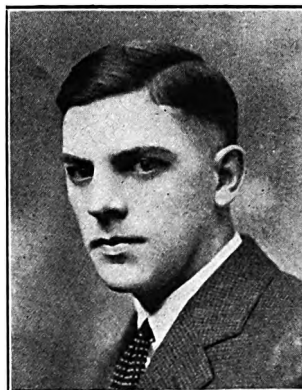
To Mrs. Harris falls the task of convincing us that English should be included in the pharmacy school curriculum. Although many students will never realize the value of her teachings during their school days, the future will prove to them that her statement, "A good use of English is essential to the success of any business man," is true.



LEROY D. EDWARDS, B. S.

Demonstrator in Pharmacognosy

Men who know their subject well are few, but men who know their subject and know how to present that subject in an interesting way, are fewer. Although Professor Edwards has been with us only a year, his pharmacognosy lectures have proven him to be a member of the latter class. We all hope he continues as a member of our faculty.



GERALD W. WAGNER, M. S.

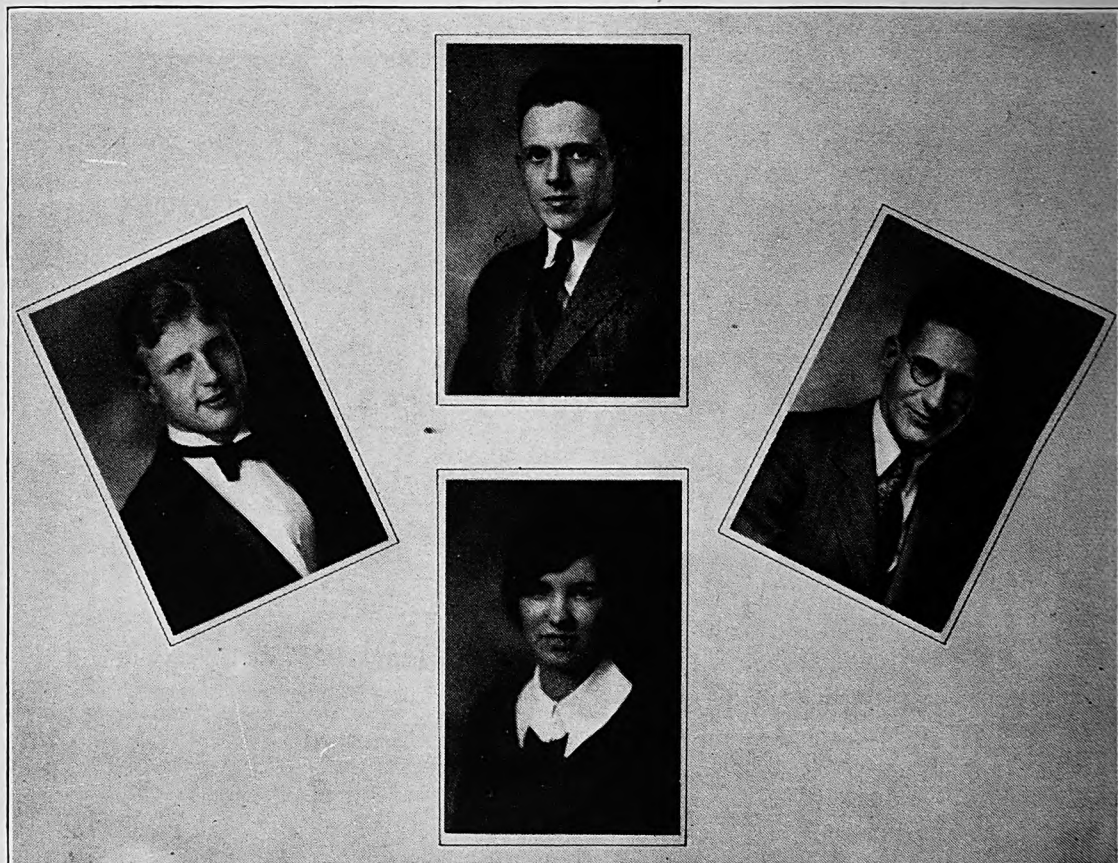
Instructor in Chemistry

There are some problems in chemistry that many students would never understand if it were not for the fact that we have Mr. Wagner on our faculty. His method of teaching, though it seems too simplified to many, brings results and truly, "We should judge others according to results."

CLARENCE M. FINFROCK, LL.B.

Professor of Law

Professor Finfrock is the type of instructor we seldom hear about and rarely come in contact with. Law is a subject universally believed to be dry and boresome, but it is with real pleasure the students assemble to hear his lectures on the legal side of pharmacy. Why can't we have more like him?



THE PHARMACON STAFF

As this edition goes to press we lay down another milestone in the progress of our school paper. We trust that you may have a few good words for us and our efforts, however, our greatest desire is that you save your remarks, turn them into pharmaceutical discourse and write us an article. The cooperation given the editor this year has been very commendable. Our paper we believe is growing in popularity, and we do not want you to be left out of anything, so do cooperate with the staff next year and help them along.

In as much as we have to write about ourselves in this article we have said all that we care to say. We shall leave the remarks good and otherwise up to you after you have leafed through this, the last edition of the year. In such a light we respectfully submit our year's work; this edition and those preceeding, for your criticism.

Robert M. Porter	Editor
Richard Koch	Managing Editor
Harry Valway	Advertising
Lucile Bickford	Circulation Manager
Prof. N. T. Chamberlin	Faculty Adviser
Vincent J. Stark	Artist

THE PHARMACEUTICAL RESERVE





LAWRENCE H. BALDINGER, *B. S.*

A man of deeds. "Baldy" has been an outstanding personage on the campus for four years. His tasks successes have been complete. Because of that we are all his admirers, and because of his propitiousness, we are all his friends.



ISADORE GOLDFARB, *B. S.*

"Goldy" in both age and appearance, is the youngest fellow among those receiving the *B. S.* degree this June. Throughout his four years in this school "Goldy" has dug into and toiled laboriously at his work, just as he does in every other case, with the result that he leaves a fine record behind.



SISTER MARY ADELAIDE, *H. H. M., B. S.*

Sister Mary Adelaide is a scholar. Quietly and surely, she has learned all that Pharmacy School has to offer. That which has attracted us especially, is her very evident desire to help all the less fortunate with their academic difficulties.



DONALD B. O. KESSLER, *B. S.*

Intelligent—fraternal—talented—orderly—neat are some of the adjectives Don's close friends would use to describe him. Don possesses a true professional air and a winning personality. There is no doubt but that the success he enjoyed in school will continue when he enters the pathways of his life's profession.

ROBERT M. PORTER, B. S.

Bob has climbed so many rungs in his Ladder of Success that extensions will soon be necessary. For an undertaking that requires good management, hard work, and the securing of cooperation of his fellow students, they all go to Bob. He is a leader, a capable and pleasant one.



RUDOLPH A. SCHREINER, B. S.

Schreiner possesses a forcible, stalwart, and prosperous appearance. While in school he has participated in numerous extra-curricula activities and in every case he displayed himself as a leader, a dependable worker, and an excellent sport. His school mates will long remember Schreiner by his well-trimmed "Hollywood mustache."



MELVERNE W. ALDRICH, Ph. C.

"Mel" thinks for himself and forms his own opinions; however, he is always willing to listen to the opinion of others. This fact has helped him in his studies, for he is a serious student. It has also made him a friend to many, and he is a cheerful, likeable one.



RALPH W. BLAKEWAY, Ph. C.

Has anyone ever heard Ralph refuse a favor for any student, no matter what degree of friendship he holds for them? He is too much a gentleman, and too generous-hearted a friend to be heedless, when it is possible for him to step out of his hard-working way and give aid.





IRENE R. PIRSON, *Ph. C.*

Ruth has been, perhaps, the "sister keeper" of "Dutch;" the two girls are inseparable. Her business ability has been proven by means of the capable manner in which she has managed the finances of the Kappa Epsilon.



MILDRED L. PIRSON, *Ph. C.*

"Dutch" during the past four years, has been a prominent figure at all the social functions of the school. Her untiring efforts have gone a long way in making Kappa Epsilon, the successful sorority that it is, socially, morally, and financially.



CARL J. SHANE, *Ph. C.*

Shane is the boy with the irresistible "it." Carl is a fine young fellow, he has individuality, which, with his diplomatic ways, makes him a delightful person. Carl is witty, jocular and an interesting young man.



SISTER JEAN MARIE, *H. H. M., Ph. C.*

Sister Marie's purpose in school is very evidently to gain a thorough knowledge of our arts and sciences. But that, in no way, interferes with her friendly disposition. A smile is always on her face and her help is always extended to her fellow students.

LON G. LYMAN, *Ph. C.*

Lon is a real buddy and a true pal to everyone. In spite of the enormous obligations that the realm of matrimony placed upon Lon's shoulders, this energetic and plucky individual, by means of continual hard work engineered himself to success in the eyes of his fellow students. With the continual application of the practices and habits Lon has developed in school, victory and prosperity will surely be his reward.

JOSEPH W. McELROY, *Ph. C.*

Joe is one of the lucky married men of this class. Perhaps the family obligations served as an incentive for hard work, nevertheless Joe has strived diligently to reach success. He deserves much applause for his consistent plugging.

STANLEY L. NOVATNY, *Ph. C.*

"Stan" is a hard working boy. He puts in more time gathering practical knowledge at the store than any other student in the school. However, he finds time to maintain a fair scholastic record and to enjoy a regular position on the Pharmacy School Basketball Team.

EMMA K. PEJSA, *Ph. C.*

Just as there are certain students who stand out as leaders among the men, Miss Pejsa ranks similarly among the lady students of the school. As a scholar of high standing and as a diligent worker, she has lead the girls in causing the sorority to become a rapidly growing chapter of a National organization.





IRENE BORIS, *Ph. C.*

Just a wistful look and a winsome smile are Irene's credentials for winning people to her. If you see anybody hurrying along the campus at nine minutes after the hour that is Irene. A bundle of books, a studious air, and a bustling, hurrying walk would further assure you that it was she.



MICHAEL F. GAYOK, *Ph. C.*

First of all, Mike is in school to get an education, and he is getting it. Secondly, it is his set purpose to permeate the air with cheer. In this, too, he succeeds to a remarkable degree. His friends will back this statement by assuring you that is why they are his friends.



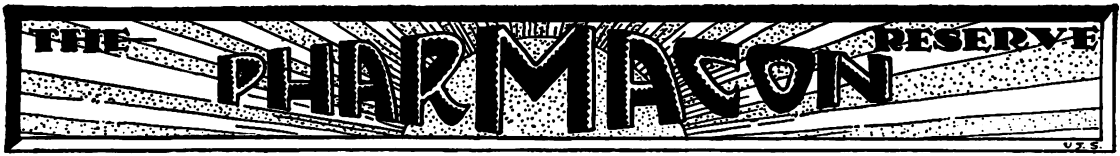
MYER L. KARNER, *Ph. C.*

As president of the Student Council, Myer has shown us that he is a silver-tongued orator. On numerous occasions he has been called upon to address the assembly and he did so with clever speech characterized by both serious thought and sparkling wit.



ALVIN H. KUTTLER, *Ph. C.*

Alvin is a fellow of aristocratic appearance—always tidy and of an exceedingly fine personality. Though he doesn't rank among the highest in scholarship, Alvin is an industrious worker and a good student.



PAUL S. STEIDL, *Ph. C.*

Here is the "Beau Brummel" of Pharmacy School. Whether on the campus or at our various social affairs, his careful dress is ever notable. His success with the fair sex is accordingly just as notable. Likewise, he is noted for his efforts to keep the fraternity supplied with the latest and hottest phonograph records.

SAM S. COHEN, *Ph. C.*

Although he is the smallest student of the class, Sam is very popular. He maintains a jovial and mirthful countenance, but always settles down to hard studying whenever that is required. Sam is a good student and an excellent "mixer."

MILTON E. M. GEIGER, *Ph. C.*

Milton's brains run up and down, and as there is over six feet of him, there is a whole lot of knowledge stored up within him. He is one of the real students of the class and is one of the type who gets there.

LEO J. GRAHM, *Ph. C.*

Leo, according to one of his many friends, is just a fine friend and a "blame good sport." He is a plugger rather than a brilliant student, however, his characteristic perseverance carries him on. His interest in school activities might well be copied by most of us.

JULIUS J. MILLER, *Ph. C.*

Here is the "daddy" of the class. He applies himself seriously to his work and is always ready to give the benefit of his learning to others. With his pipe in his mouth and a contagious grin on his face, he stands as a friend to all.

EDWARD PALEY, *Ph. C.*

This man relies on his work alone to keep his name in the foreground, and his high scholastic attainments during his entire school career have easily accomplished that. Where he finds his vast amount of knowledge we do not know, yet we have never seen him in class unprepared.

MAX RIEMER, *Ph. C.*

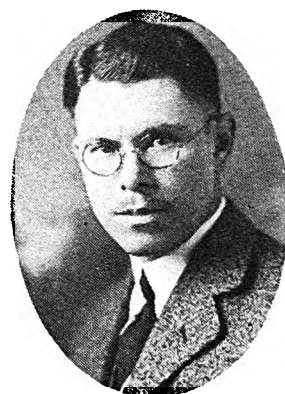
Max, sometimes brisk and agile, while at other times indolent—is a typical "happy go lucky boy." Max lets things come and takes care of them as they appear. He is energetic and industrious when the action demands it and always tries his best to do what is required of him.

MAURICE SCHOENBURG, *Ph. C.*

Unfortunately Maurice has had the embarrassment of hearing his name pronounced at least twenty different ways. He probably has had as much practical drug store experience as any other member of the graduating class. He has distinguished himself by his policy to correctly apply the theories to practice. He has proven a conscientious student, dependable, active and a meritorious person.



William Hosler '22
President



Paul Hudson '23
Vice-President

THE ALUMNI ASSOCIATION

We are indeed glad to introduce to you by means of this page, four loyal supporters of our school. It is indeed true that a school is known by the alumni she produces. These fellows have worked hard for this year's banquet at the Acacia Country Club. Then, too, you recall the smoker held at the Kappa Psi Fraternity house early in the year. They are deserving of your support and cooperation. A smoker is also scheduled to be held at the Phi Delta Chi house in the early part of the coming school year.

If you have any suggestions for the good of the School, Alumni Association or the Pharmacoon just drop one of the men a line in care of the school and we assure you that they will give it their most careful consideration.



Walter Wargell '28
Treasurer



Louis Gressel '24
Secretary





KAPPA PSI

Beta Beta Chapter

Founded at Russell Military Academy in 1879

70 Chapters

Established at Reserve in 1910

Fratres in Facultate

Edward Spease	Robert A. Stockhaus
Neil T. Chamberlin	Herman P. Lankelma
Orlando J. Carner	Franklin J. Bacon
Paul R. Hudson	

Frater in Universitate

James Speer Neely

Frater Ex-Collegio

Otto A. Rehburg

Fratres in Collegio

Nineteen Twenty-nine

Melverne W. Aldrich	Robert M. Porter
Stanley L. Novatny	Ralph W. Blakeway

Nineteen Thirty

Otto L. Wolfert	Alexander E. Celke
Brooke K. Phillips	Robert A. Fitch
Harry F. Valway	George D. Novatny
Edwin H. Whittaker	George W. Suntala
Ralph Cullinan	

Nineteen Thirty-one

Karl W. Schweickardt	Roger K. Lager
Weldon R. Rehburg	Frank Viglas
Michael Lauria	Russell McArtor
Edward Hoefer	

Pledges

Lewis Messersmith	Winton A. Webb
John Obester	Harry Henderson
Frank Kaspar	

KAPPA PSI

The opening of Pharmacy School last fall found Beta Beta Chapter instilled with a new energy. The spirit had its origin in the persons of Robert M. Porter, Charles A. Young and Alexander E. Celke. It was an ardor that persisted during the entire year, resulting in one of the most fruitful terms in the history of the Chapter. These three men were just back from Portland, Maine, where the National Convention of the Fraternity had taken place, on August 17. Their being present at so imposing an assemblage and their having a hand in accomplishing important work was the source of their enthusiasm. It must have been impressing, indeed, to make the acquaintance of delegates from the remote corners of the United States, representatives of over ten thousand brothers, distributed among seventy chapters.

An excellent opportunity to witness the inner workings of the profession was offered by the opening of the Convention of the American Pharmaceutical Association immediately following the adjournment of the Kappa Psi Convention. So our representatives came home, proud that they are students of the pharmaceutical arts and sciences, and determined to make the coming year a success,—a spirit that was contagious.

The rest of the fraternity, at this time, was composed of Ralph W. Blake-way, Melverne W. Aldrich, Robert A. Fitch, George D. Novatny, George W. Suntala, Brooke K. Phillips, Harry F. Valway, Edwin H. Whittaker and Ralph Cullinan, making a total of eleven men. They united their efforts and on the opening night of school, staged the usual smoker at the house. This filled its purpose well in causing the fellows to work together and reaccustom themselves to cooperating with each other. In addition, the new faces became familiar and friendly ones.

On the 26th of October, the number of active members of the fraternity was increased to fourteen, when Wilbur Grimm, Wilbur Smith and Otto Wolfert entered the perilous cavern and emerged proud wearers of the pin. Then, on December the fourteenth, with three enthusiastic new workers to help, a house party was held and decidedly enjoyed by everyone present.

Now the time for the February initiation confronted us, and to our delightful surprise, we found eight students ready and waiting at the portals. With them were two graduate members, Robert A. Stockhaus, a seeker of a Master's degree at school, and Otto A. Rehburg, a successful pharmacist of this city. The eight students, who are now brothers, were Stanley Novatny, Roger Lager, Frank Viglas, Russell McArtor, Karl Schweickardt, Weldon Rehburg, Michael Lauria and Edward Hoefer. With such a promising array awaiting, the Alumni turned out and joyously helped us change these "passive" men into "active" ones. Since Brothers Grimm and Smith departed from school at the close of the first term, the total membership now stands at twenty. This goodly number invited the alumni and pledges to another House Party, held a short time after initiation. These affairs, though few in number were so thoroughly enjoyed that they, together with the Spring Dance, easily filled the social purposes of the fraternity.

The crowning event of the year, the Spring Dance, was held on the 26th of April. The Flamingo Room at the Alcazar Hotel was the scene of the lively gathering of pledges, alumni and actives. A fine dinner was pleasantly interrupted by the talks of Robert Porter, Past-Regent, who served as toast-master, Harry Valway, Regent, and Dean Spease. We regretted the absence of Mrs. Spease; nevertheless, the Dean found dancing partners and did enjoy himself. No one, in fact, could resist the entrancing music and the general air of good-fellowship that permeated the room. So we all laughed and danced and then went home, looking forward to next year's Spring Dance.



KAPPA EPSILON

Seven Active Chapters Founded at Minnesota College of Pharmacy in 1921
One Alumni Chapter Eta Chapter established in 1928

On May 13, 1921, representatives from Minnesota, Nebraska and Iowa Universities met at Minneapolis, Minnesota for the purpose of establishing a National Pharmaceutical Society for women students. This resulted in the organization of Kappa Epsilon Sorority with Minnesota, Nebraska and Iowa as Alpha, Beta and Gamma Chapters respectively. Its membership is made up of women students in Colleges of Pharmacy which are members in good standing of the American Association of Colleges of Pharmacy.

The object of the Sorority is to foster a spirit of sisterhood, to cooperate with college authorities in maintaining high scholastic standards and to assist in the advancement of pharmaceutical education.

A cup is awarded each year to the Chapter maintaining the highest scholastic average for the preceding year. In order to promote post graduate work, plans are being made to award a definite sum each year to the individual graduating with highest social and scholastic average, provided that she continue her work in some field of Pharmacy.

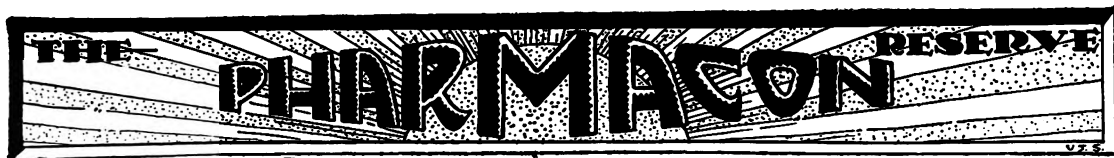
In 1928, the Grand Chapter granted a charter to the group of girls who had previously been organized as Phi Kappa Omicron, a local sorority. The Chapter was installed as Eta, by Miss Naomi Kenefick, Grand President and Miss Mary Hunt, Grand Treasurer on November 30, 1928. The Charter members are: Misses Lucille Bickford, Ruth Kotershall, Wanda Baygrowitz, Ruth Pirson, Mildred Pirson and Emma Pejsa.

Eta Chapter claims to be the first National sorority to be established at Western Reserve University. It sent its first delegate to the National Convention which was held at Lincoln, Nebraska, April fifth and sixth.

The number of active members was increased from six to nine when Miss Bertha Grosser, Mrs. Elizabeth Koci and Miss Marie Hoefer were initiated during the early part of the second semester. Mrs. Alice Spease and Mrs. Adelaide E. Harris were initiated as honorary members.

The officers elected for the coming year are as follows: President, Emma Pejsa; Vice-President and Historian, Elizabeth Koci; Secretary, Ruth Kotershall; Treasurer, Marie Hoefer.

The Chapter is looking forward to another year of success and prosperity.



KAPPA EPSILON

Eta Chapter

Founded at the University of Minnesota in 1921

7 Chapters

Established at Reserve in 1928

Honorary Members

Alice K. Spease (Mrs. E.) Adelaide E. Harris (Mrs. R. J.)

Sorors in Collegio

Nineteen Twenty-nine

Emma K. Pejsa Elizabeth C. Koci
Mildred L. Pirson

Nineteen Thirty

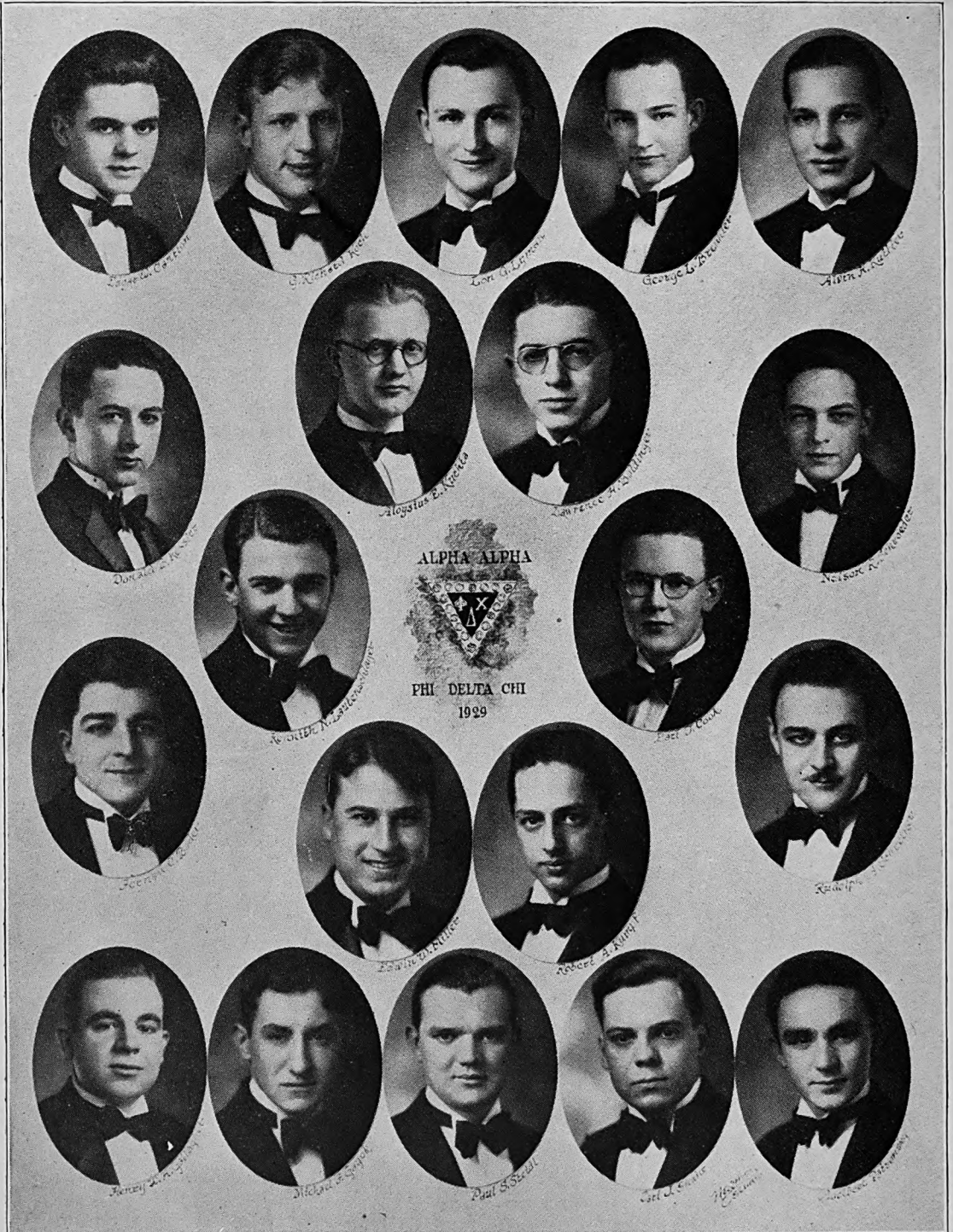
Ruth L. Kotershall I. Ruth Pirson
Lucille G. Bickford

Nineteen Thirty-one

Wanda J. Baygrowitz Marie A. Hoefer

Nineteen Thirty-two

Bertha H. Grosser





PHI DELTA CHI
Alpha Alpha Chapter

31 Chapters Founded at the University of Michigan in 1883 Established at Reserve in 1923

Fratres in Facultate

Edward Spease	William W. Hosler
Edward D. Davy	Russell Stimson

Fratres in Collegio

Nineteen Twenty-nine

Lawrence H. Baldinger	Lon G. Lyman
Donald B. O. Kessler	Rudolph A. Schreiner
G. Richard Koch	Carl J. Shane
Michael F. Gayok	Paul S. Steidl

Alvin H. Kuttler

Nineteen Thirty

Earl T. Cook	Henry W. A. Gallagher
Edgar Cantlon	George L. Bruehler

Nineteen Thirty-one

Robert A. Kumpf	Kenneth Lautenschlager
Aloysius Kuchta	Nelson Schroeder

Adelbert Patronskey

Nineteen Thirty-two

Fernau Bader	Edwin W. Miller
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PHI DELTA CHI

Phi Delta Chi Fraternity was founded at the University of Michigan in 1863 under the supervision of Dr. Prescott, and at the present time has grown to thirty-one chapters at recognized schools of pharmacy. It is a professional Pharmaceutical and Chemical fraternity and is doing its bit to promote the interests of Pharmacy.

In 1923, Alpha Alpha Chapter was organized at Western Reserve University under the guidance of Dean Edward Spease, an alumnus of Xi Chapter at Ohio State University, and made its first headquarters in the old dormitory known as Adelbert Hall. Since then the chapter has moved two or three times, each time acquiring a better home and adding new pieces to its collection of furniture.

Alpha Alpha started the school year of 1928-1929 with about twenty active members. Due to financial difficulties and various other reasons, we lost two men at the end of the first semester, but three new men have entered the ranks. On March 1, 1929, Kenneth Lautenschlager, Edwin Miller and Fernau Bader trod the hot sands and were initiated into Phi Delta Chi. We now have the following brothers on the roll: Richard Koch, President, Columbiana, Kenneth Lautenschlager, Vice President, Akron, Adelbert Patronsky, Secretary, Cleveland, Robert A. Kumpf, Treasurer, Canton, Aloysius Kuchta, George Bruehler, Edgar Cantlon, Nelson Schroeder, Henry Gallagher, Rudolph Schreiner, Alvin Kuttler and Fernau Bader, all of Cleveland, Earl Cook, Donald Kessler, Earl Shane and Edwin Miller, all of Canton, Michael Gayok of McKeesport, Pa., Paul Steidl of Akron, Lon Lyman of Youngstown, and Lawrence Baldinger of Galion.

The social functions of the past year have all been worthy of mention. On October twenty-sixth, an informal dance was held at the Woman's Club on Euclid Avenue. The next dance was held at Hotel Winton on December twenty-first. On March fifteen the first semester pledge organization entertained the chapter with a smoker, at which everyone had a good time and plenty of eats. These affairs were all quite entertaining, but the greatest of all was an informal dance held on May third in the Marine dining room at Hotel Westlake. Thus ended the last social meeting of the year.

At the close of the term the chapter had yet on its roll, twenty active members, but many of these will not return to the ranks in the fall due to the fact that several will be lost by graduation. May the chapter look forward to such progress in the next few short years as it has had in the few years just completed by the men leaving us at the close of the term.

And so the sixth year of existence of Alpha Alpha of Phi Delta Chi comes to a close, and as the curtain is pulled back, its actives who have been here for one year, or three or four years, can look back over a period of more than favorable progress.

ALPHA ZETA OMEGA

Alpha Zeta Omega, first known as Alpha Kappa Upsilon, was founded at Reserve in 1922. To fratres Max Cohen, Carl Kovacs, Maurice Klein and a few of the others must go a world of credit for their untiring efforts in moulding this chapter.

In 1927 this group went national and was installed as Theta chapter by Supreme Deputy E. G. Sless of Philadelphia.

Under the guidance of Frater Roy Scott, who was directorum at that time, Theta immediately stepped to the front by winning the Directorum cup which was offered by the Supreme to the chapter having the best standing with the Supreme.

Later we were very instrumental in having the Mu chapter at Pittsburgh also added to our fraternity roll.

Philadelphia saw the birth of the Alpha Zeta Omega. Starting with David Dyen, E. Sless and others doing the work it has now become the strongest pharmaceutical fraternity of its kind.

Since June 1921 this fraternity has been very active in spreading its doctrine of friendship and co-operation until now we have the following chapters:

Alpha	Philadelphia, Pa.
Beta	Philadelphia, Pa.
Gamma	Philadelphia, Pa.
Delta	Montreal, Canada
Epsilon	Newark, N. J.
Zeta	New York, N. Y.
Eta	Cincinnati, Ohio
Theta	Cleveland, Ohio
Iota	Brooklyn, N. Y.
Kappa	Baltimore, Md.
Lambda	Louisville, Ky.
Mu	Pittsburgh, Pa.

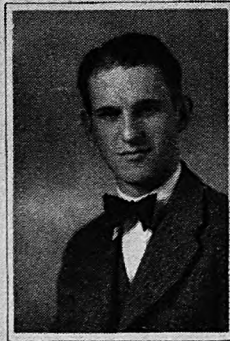
This year under the leadership of Directorum Milford Harris, the chapter has been as active as ever. Four men of the usual high caliber were taken in and a pledge dance given in their honor at the Rainbow Room of the Hotel Winton. Mr. and Mrs. Chamberlin were our guests of honor.

Later in the year, under the leadership of brother Abe Amster, a dinner dance was held at the Oakwood Country Club.

In May, seven brothers of Theta were guests of Mu chapter at Pittsburgh at their annual dinner dance. Frater Louis Gressel, who is ex-officio father to Mu, headed the group which went down.

This June the annual convention is to be held at New York, July first to third and Theta will be well represented. Next year we have hopes of holding the convention in Cleveland.

Student Council



STUDENT COUNCIL

President	Myer Karner
Vice President	Edwin Whittaker
Secretary	Melverne Aldrich
Treasurer	Isadore Goldfarb

Seniors

L. H. Baldinger	Isadore Goldfarb
D. B. O. Kessler	R. A. Schreiner

Juniors

M. W. Aldrich	P. S. Steidl
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Myer Karner

Sophomores

Edwin Whittaker	Robert A. Fitch
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Freshmen

Frank Viglas

STUDENT COUNCIL

The Student Council of the School of Pharmacy was instituted early in the history of the school to serve as an intermediate agent between students and the committee on Student Activities, representing the faculty. As such an agent its activities have been in a large part curtailed by the members not being able to find time when all could be present. The causes of this existing condition are the varied schedules of the members, part of whom have matriculated for the three year course and part for the four year course. It is hoped that within the next year or two when the schedules have been arranged for the four year course, the student council will find a suitable and fixed time for its weekly meeting.

The student council of 1928-29 held its first meeting on November 5, 1928, immediately after the class elections were over. Mr. Karner was elected president, Mr. Whittaker, vice-president, Mr. Aldrich, secretary and Mr. Goldfarb, treasurer.

Near the first of December, the council elected Michael Gayok as student athletic manager and also appointed a dance committee composed of Baldinger, chairman, Steidl and Whittaker. The dance was held at the Georgian Room of the Hotel Cleveland on February fourth, and was well attended by the faculty and the student body of the school.

Near the end of the basketball season the student council appropriated enough money to buy a loving cup to be awarded to the team winning the basketball championship. Three fraternities and one independent team entered the contest, the award was finally made to the independent team, and the cup now rests securely among the trophies in the pharmacy school library.

Later on in the year a Parke-Davis committee was appointed to negotiate with the company regarding the biennial trip to Detroit on May 9. All those who went to Detroit reported a very nice time.

At the same time new rules regarding student athletics were made and passed by the council so that in the future our student athletics will have stricter supervision than heretofore.

Late in the spring the council met and after some controversy awarded Honor Keys to M. F. Gayok, P. S. Steidl and M. H. Cole and special Pharmaccon keys to Robert Porter and Vincent Stark.

The president, secretary and younger members of the council deserve special mention of the interest they have taken in the meetings. It is hoped that in the future more spirit will be shown by the student council members to have a well-knit organization representing the student body.

Pharm



VOL. 3

OCTOBER, 1929

NO. 4

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

THE NEW FOUR YEAR COURSE IN RESPECT TO MINIMUM STANDARDS FOR RECOGNIZED SCHOOLS

By Dean Edward Spease

(Delivered before a sectional meeting of Pharmacy Boards and
College Faculties held in Detroit on the 24th of April, 1929.)

The title assigned to me appears at the top of this paper, and inasmuch as the same subject matter has been discussed in this meeting, it is my purpose to confine myself to the subjects taught in a four year course and, perhaps, in some measure, to justify the teaching of them.

The first thing to be considered in the formation of a curriculum is a clear understanding of the purpose of such a curriculum. As our first purpose, we shall say it is our duty to prepare students for the practice of Pharmacy. Is it our purpose to prepare them for the practice of Pharmacy only as it is practiced in the stores, commercial and professional, and in the hospitals of today? If so, it should then be a course of intensive training; if not, it should be looked upon as the laying of a proper foundation, educationally, not for the practice of today only, but for the development and change which may occur tomorrow.

If we are to prepare solely for the practice of today, then we must accept just the analysis, or "job survey," directed by Charters and teach those subjects alone, and just as much of them as this survey, by its careful analysis of present day Pharmacy, proves to us is needed by a person who expects to practice Pharmacy.

If, on the other hand, we expect to fit the candidate, not only for the practice of today, but also for the development and change of tomorrow, then we must prepare a curriculum that provides education in fundamentals and truly furnishes the candidate with "the working tools of his profession" in order that he may be prepared and equipped to understand and adapt himself to the changes, both professional and com-

mercial, that he may be called upon to face tomorrow.

If our candidate receives the proper education at our hands now, it may not be an impossible supposition to think that he may have some hand in the shaping of future events, and that he may be equipped to help bring about the kind of Pharmacy that he would like to practice.

The Charters Survey may well be accepted as a foundation upon which to build, and we may add to this what, in the opinion of each School, is a desirable superstructure.

It does not seem to be desirable that the curriculum for all Schools be identical, but opportunity should be given for the development of original ideas and even, indeed, for some educational experimentation.

Some Schools may prefer to serve as training schools only and to offer only the minimum courses indicated by the Charters Survey, while others may desire to make provision for the development of specialists who may be listed as teachers, professional pharmacists, commercial pharmacists, hospital pharmacists, pharmaceutical chemists and research workers, or various combinations of these.

In order that a student may go from one school to another where he may take up a specialty that is more highly developed in the second school than it is in the first, he must be given a good foundation in elementary branches or this becomes impossible.

To illustrate this last statement by a concrete example, assume that a student wishes to specialize in Pharmacognosy, then his elementary courses of a botanical and chemical nature must be such that he need

not repeat them when he wishes to pursue higher branches in this subject. The same thing is equally true if he wishes to specialize in the organic chemistry of medicinals. He must be prepared in elementary chemistry and have sufficient knowledge of the uses and actions of those substances he may wish to study or synthesize later on.

The point I wish to make is that specialization or applied courses in pharmaceutical subjects should not precede or be substituted for fundamental elementary courses.

A number of articles have appeared in recent publications, discussing the four year course, each article offering arguments either for or against it. Some of these articles indicate that the writers of them wish to make the point, and this same point is also brought out in regard to medical and some other courses, that the financial reward does not justify four years of college. In my opinion, the satisfaction to be obtained from having had a four year course in college, and the personal contacts the individual can make as a direct result of having had this course, always justifies the time spent upon it, even if the individual becomes a clerk and rises no higher. No four year course can add any natural ability but it can add much to natural ability. It must be admitted that it takes a certain amount of time and study for one to be able to grasp situations and deal with them and the mere short course, memorizing of a list of what are supposed to be facts, together with a dexterity in certain forms of technique, which may be taught to any normal brain and hands, does not constitute education.

There is little doubt but that the ideal manner to prepare oneself for anything would be to have a liberal arts training first, even if this training does include a tendency toward the desired end, and then to enter upon the intensive, or applied, training, or professional course afterwards. The business of making a living must be recognized and, therefore, some practical shortening of time must take place.

In Pharmacy we have been accustomed to start our professional training at the same time we start our cultural subjects and fundamental sciences and if the proper professional courses are given first I can see no fault with this plan, nor do I believe that it entirely eliminates, even if it does

shorten, the time of the ideal method. I am an advocate of the plan of placing as many of the cultural branches and fundamental courses as can be so placed, in the first two years of the curriculum.

These things, I believe, can almost fit into the first two years of the curriculum in all schools. Electives, specialization, and applied courses can well come in the last two years of the course, and intensive specialization in one subject for the few who are capable of it, and desire it, can be left for graduate study.

To this end it would seem to the writer that for a minimum course there should be given, in the first two years, the usual college course of eight or ten credit hours in elementary chemistry and qualitative analysis. This should be followed in succeeding years by a year of eight or ten credit hours in both organic and quantitative chemistry. These three courses should be considered as fundamental courses and should not be applied ones. A year of English, including some grammar and a short survey of literature, is the minimum amount that should be given. A year of six or eight credit hours in Botany, including laboratory, should be considered as a fundamental course and come in the first year. A year of mathematics, made up of trigonometry and analytic geometry and containing algebra, if the student has not received a sufficient amount of it in his secondary school, should be in the curriculum. A year of modern language, either French or German, and a year of general physics should likewise be included. There are advocates of a year of general physiology to be given in the first or second year, if time permits. In our own school we have found it necessary to put off one of the years of chemistry until the third year, though we would prefer to have it during the first two years, and we have put a year of Pharmacy in each of the first two years and placed physiology in the third year, in order to have it follow two years of chemistry. I believe there is some justification for argument both for and against this plan.

Personally, I am very much in favor of at least a survey course in Pharmacy in the first year, not only to hold the interest of the student, but to acquaint him with the field before him, and to justify to him the reasons why he is taking these cultural

courses and the fundamental ones in science, without any application to Pharmacy. I may add that since we have adopted this method we have never had a complaint nor have we been asked the question by the student, "Why do I have to take English?" or any other similar question.

In the remainder of the time in the four year curriculum the student may secure well rounded courses in manufacturing, dispensing and analytical Pharmacy; he may learn something of the history and literature of Pharmacy; he may take what may be covered by the name "pharmacognosy," including "materia medica" and pharmacology; and, at least one general course in bacteriology, including laboratory.

I believe that a short course in law, under the heading of commercial law, or phases of law, pertaining to his profession, should be given him by one trained in law, but that Pharmacy laws and regulations should be taught him by a Pharmacy teacher who knows the reason for the existence of these laws, and what they hope to accomplish.

If the student wishes to become a commercial druggist and does not care to become a scientist or professional man, then he can elect courses in economics and business administration, which courses always include interpretive bookkeeping. I am not in sympathy with short applied courses in salesmanship and advertising, in place of fundamentals, any more than I am in case of the sciences.

State Boards, however, cannot be concerned with commercial subjects, for the existence of these Boards is not for the purpose of aiding the pharmacist to financial success, but for determining his fitness to serve the public, and to insure proper protection to the public against, not only the unfit, but the unscrupulous and ignorant.

I believe that if the plan I have outlined be adopted in principle, and I don't ask for its adoption in each detail, that we shall gradually find the ranks of Pharmacy filled with men and women who can solve its problems, and who will aid the teachers, Board members, and other leaders in Pharmacy, rather than to, as is so often the case, prove a hindrance to us, when we desire to take any forward steps.

"Saved by the bell," sighed Miller, as he walked out of Math. class. —*Orange Peel.*

PHARMACY WEEK

October the thirteenth to nineteenth—National Pharmacy Week—just what does that mean? To the ordinary layman it probably and unfortunately has no significance; but to us as pharmacists, would-be or have-been pharmacists and to those who are interested in us, it signifies something of vital interest. It should instill in our minds the necessity of inspiring the public in a pharmaceutical way. It is only one short week—but how much can be and is being done.

The American Druggist believes that "Pharmacy Week" holds two most important aspects. They are:

1. To bring the profession of pharmacy to the attention of the public.
2. To bring doctors and druggists closer together, establishing a better understanding of their mutual responsibilities.

In some parts of the country there have been disagreements between the medical and pharmaceutical professions. This cannot but work to mutual disadvantage. This condition obviously should not exist; but instead, each branch of health service should work in closer harmony and toward an understanding of mutual problems.

Newspapers which will contain advertisements and news of Pharmacy Week, are being read by 20,000,000 people every day. Through these and many ways, we can effect important contacts with the public on behalf of pharmacy. And Pharmacy Week is not being advertised wholly from the commercial standpoint; we are trying to make it better known as a profession.

Since one week is being set aside in the interest of pharmacy as a profession and a coworker with medicine, let us as pharmacists live up to it and make ourselves more worth while and able to carry on.

Dr. J. Barker and Mrs. Onslow, working at the Low Temperature Station, Cambridge, England, have discovered that oranges, injured by carbon dioxide, contained small amounts of alcohol. In one of the experiments, the injured oranges contained 0.64g. of alcohol in 100 c.c. of orange juice, while controls kept in air contained 0.03g. in 100 c.c.

ALCHEMY: PREMATURE SCIENCE AND HUMBUGGERY

By Jerome Adelstein '31

Many of us look back with amused contempt on numerous beliefs that were cherished by the scholars of a former time. We pass by witchcraft, magic, astrology and alchemy, with a superior smile. Yet there has been no great change in mental capacity during historic time. The claims put forth by adepts in these occult arts and sciences were accepted, in former ages, by many who were both good and learned. We may be sure that their understandings were no feebler than ours. Let us briefly inquire into the cause of this changed point of view in so far as it concerns alchemy.

As to the origin of alchemy we are still in the dark. Undoubtedly it arose in the Near East—probably in Persia—and had its most pronounced ancient development in Egypt during Alexandrian times, 4th century, B. C. Anyway, the earliest documentary evidence is of that period. What its practices consisted of previous to and during this very early period is a matter of conjecture. Such evidences and remnants as have come down to us seem to indicate a practice akin to magic carried on in caves and other out-of-the-way places, probably more or less associated with religious rites in such a way as to give prestige and power to the priests, medicine men, or others, who catered to the curiosity and gullibility of their followers.

When ancient Greece was at the height of her glory her great thinkers were more or less hospitable to ideas of oriental origin and so it is not unnatural that they should link alchemy up with their philosophical systems. Many Egyptian names are to be found in the early Greek writings that have attributions of an alchemistic nature. From this early period up through the early centuries of the Christian Era there is nothing to indicate that alchemy was practiced with anything like the fervor that held sway during medieval times. Its teachings, in so far as they dealt with physical experience, were merely of a literary nature and were to be read and not practiced. There was, of course, no planning of experiments and recording of results. Whatever work was done with material substance, whatever philosophical system was interwoven with it, was mingled with charlatanry and sorcery.

For obvious reasons such practices would be recorded, if at all, in such a way as not to be readily intelligible to those outside the system. There were ancient alchemists, as there are modern men of science, who took pride in making their meaning obscure. The alchemist himself confessed as much in Ben Jonson's drama of that name (first acted 1610). He asks:

"Was not all the knowledge
Of the Egyptians writ in mystic symbols?
Speak not the Scriptures oft in parables?
Are not the choicest fables of the poets,
That were the fountains and first springs of
wisdom,
Wrapped in perplexed allegories?"

When the Arabs swept over the Near East and into Southern Europe it did not take long (9th century) to mold the still existing alchemy of the Near East and the alchemy of the Greeks (borrowed Near East alchemy, tintured with Greek philosophy) with their own original and fundamental chemical arts. The great body of alchemical literature (including the word "alchemy") had its origin during this period. The spread of alchemy into the Latin West down through the Middle Ages followed the progress of civilization.

The acceptance of alchemy down through the Middle Ages as a rational practice, so far as the scholars were concerned, must be attributed to the Greek theory of matter, as enunciated by Aristotle. His theory, as known to the Middle Ages, was constructed on the idea that all matter is composed of a mixture "Complexion" or "mistic" containing all of the four so-called "elements" (not the elements of modern chemistry). The four elements were earth, air, fire and water. These four substances, as found in this imperfect world, are never in their pure elemental state. Each has in it some admixture of the other three, the one whose name it bears predominating. These elements form antagonistic pairs, water being opposed in its nature to fire, as air is to earth. Furthermore, it was believed that each element was made up of so-called "Qualities"—things even more elusive than the elements themselves. The four qualities were hotness and coldness, dryness and wetness. These were believed to enter into the elements also in pairs. Thus fire, could it be found in its pure and perfect state, would be compact of hotness and dryness; water of

coldness and wetness, and so forth. Lastly, the Aristotelian conception did not contain the view that all matter has weight. On the contrary, two of the elements, fire and air, were regarded as of a nature to move upward and this tendency to linear movement, possessed by the mundane elements, was believed to be due to that impurity which affects all mundane things; for the perfect movement is not in a line but in a circle. Far on high, beyond the reach of mortal beings, circle the purest elements, free from admixture. Their orb was next below the fifth substance, the quintessence or ether, which is heaven and lies just within the orb of the everlasting changeless stars.

Because of this old elemental view of matter, the transformation of one substance into another was no miracle. The entry of fire or air into a substance, by altering the proportion or "Complexion" of the mixture of which all matter is composed, should wholly change its nature. Did not heat change green wood into black charcoal, or water into unseeable air? Why should it not, rightly applied, alter lead into silver or gold? This theory of the elements then was the basis of alchemy.

The manufacture of gold, the most highly prized of all substances, would naturally engage the most profound efforts of the alchemist—his effort to "cure" those faults in gross matter that prevented its attaining the nobler golden state. Could he have reached out and seized the heavenly quintessence, his task would have been easy. Unfortunately, his position on earth prevented him, in this life at least. He had to seek for that poor substitute, the elusive philosopher's stone which might perhaps contain some imprisoned trace of the fifth element, ether. Until he found the quintessence, other ways of transmutation might be tried. By shuffling the four elements in the baser metals he might per-chance hit on a mixture which would present them in the nobler form. There can be little doubt that, in the absence of crucial chemical tests, an appearance of such mutation was sometimes actually achieved. Substances that looked like the precious metals were certainly produced. These were cheaper than what we should now call the "authentic" metal, and what more, even in our day, is demanded by that public which purchases imitation jewelry?

The idea of "curing" the "mistio" of the base metals naturally gave rise to a symbolism of medical application. Thus came about the entry of derivatives of these metals into medical practice. Some useful drugs were thereby introduced. From the alchemistic fire emerged such useful remedies as the compounds of mercury, arsenic, antimony and lead which find a place in every modern pharmacopoeia.

As we trace the history of alchemy up through the Middle Ages it becomes more and more apparent that whatever basis of real experiment had grown into it through the influence of the natural philosophy of the Greeks—imperfect and faulty though honest—and Arab ingenuity, was gradually dissipated through the Dark Ages and so we find that after the revival of learning nearly all of its vicious features—those that could be made to appeal to the superstitious and ignorant people—and few of its virtues had survived. Late medieval alchemical literature is full of divers methods, most of them smacking of the procedures practiced by the modern cults which are based on pseudo-scientific principles. One of the most interesting trends of alchemistic endeavor during early modern times was the so-called iatro-chemical period when its major purpose was the making of medicine. But, here too, trickery seems to have played an important role.

The dawn of the 18th century marks the rapid decline of the alchemistic doctrine. It could not survive in the light of the facts of real physical and chemical science as promulgated by Boyle and strengthened by Lavoisier. People began to realize that alchemists were clever persons skilled in trickery rather than a real art. Due to the wider circulation of printed matter many books were published condemning the alchemists. In one we find them pointed out as "a congregation of knaves and impostors." In 1722 a member of the Royal Academy of Science (Boyle was its first president) denounced the alchemists as willful cheats and even mentioned some of their tricks. One of the favored tricks and usually most deceptive was the drilling of holes in pieces of a base metal. Molten gold was poured in the holes and the latter covered with the original metal. When the whole was heated, gold, of course, would be deposited. Another popular trick was the soldering together of

two nails, each one half gold and half iron. The gold part was painted over to resemble the iron. When nitric acid was added, the paint would disappear, bringing the gold to view. These tricks are only representative of many others mentioned by writers of prominence. As a result, the alchemists were forced to cease their malpractices. That their kind of practices have not become entirely extinct in modern times, is evidenced, however, by the works of vast numbers of palmists, spiritualists, ouija-board addicts and others of a similar nature who infest the world and continue the practice of extorting money from the unsophisticated.

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NEW GOVERNMENT RULING ON WINE TONICS

After thorough investigation the U. S. Prohibition Commissioner became convinced that large quantities of so-called wine tonics have been, in the recent past, diverted to beverage purposes. As a result, a new regulation has been issued increasing the solid content of such products to such an extent as to render them practically non-potent.

The text of the regulation reads as follows:

"In order to guard against the abuse of certain medicinal preparations, particularly a class of preparations known as wine tonics, and to prevent the use of such medicinal preparations for intoxicating beverage purposes, the following instructions are promulgated:

"All persons holding permits to manufacture wine tonics should be notified that on or after October 15, 1929, said tonics must contain not less than 30 per cent solids irrespective of the medication contained therein. The higher solid content called for herein may be accomplished by the addition of bona fide drug material (such as sugar and glycerin) to the present approved medication in the discretion of the manufacturer.

"The present rule as to the alcoholic content and minimum drug strength, as embodied in section 1103 of regulations No. 2,

will be applied as heretofore. Samples made according to revised formulae should be called for in each case."

ISOLATE DRUGS IN VENOM OF TOADS

The dried venom of Chinese toads has been found to be a virtual pharmacopoeia.

Four potent substances have been isolated successfully by Dr. K. K. Chen, with the co-operation of Dr. Hans Jensen of Johns Hopkins medical school.

One is ergosterol, which cures rickets in rats in exactly the same manner in which cod liver oil does. It occurs together with cholesterol, a white, fatty, crystalline alcohol which is tasteless and odorless.

Another is adrenalin, identical with that obtained from the suprarenal glands of animals, which has been used widely in medicine. The suprarenal gland, located near the anterior end of each kidney, secretes a substance which has important effects on the circulatory and muscular systems.

The other two principles have an action similar to that of digitalis, which has been employed in the treatment of heart disease. Digitalis is an important drug coming from the leaves of the purple foxglove.

The venom, processed into dried cakes by the Chinese druggists, has long been used in the Orient because of its medicinal properties. Taken internally as a pill it is said to be able to break up colds, while externally it has been used in the treatment of toothache and local inflammatory conditions.

Experiments have been conducted with animals but it is hoped, according to Dr. Chen, that further study in man will show the newly isolated substances to be useful therapeutically. Mystery shrouds the production of the cakes, which are rich with substances identical with animal products on the one hand and resembling plant products on the other, and are at once either a virulent poison or a powerful and beneficial medicine.

Attempts are being made to secure specimens of the toad for a detailed morphological study, to ascertain which species produce the venom. The method of securing the secretions and drying them into cakes also is the subject of inquiry.

A CHALLENGE!



PHARMACY IN GERMANY

By J. R. Bowden, M.P.S.

After one has lived and worked in various continental countries, one cannot but help appreciating the superiority of pharmaceutical life in Germany. This superiority covers not only professional status, but the qualification, hours of service, and the profession as a whole. In Germany the pharmacist is equal in professional status to the medical man. This can be chiefly attributed to the fact that the qualifying curriculum is longer and of a much higher standard than in England.

The student first entering pharmacy must have his *Maturum*, which is the equivalent of our matriculation. He commences his career with a two years' apprenticeship, after which time he takes his first examination. Should the student fail in this, he is allowed only one other chance, which may be attempted in six months' time. He now returns to the pharmacy for a further year, after which time he commences his studies at the university. This period of one year, which has to be spent in a retail business, may be split up into two separate six months, one of which may be spent in a foreign country.

At the university the student must remain for a minimum period of two years before presenting himself for his State examination. This comprises, practically speaking, the same subjects as are taken in England, but each subject consists of a practical, written and oral examination. The whole time taken for the latter is approximately four weeks. When the student has passed his examination he must spend two more years in a pharmacy before making his application for probation. He may then assume the title of pharmacist, or, as known in Germany, an "Apotheker." Following this, he may continue his studies at the university for a further two years, after which time he can take another examination, which enables him to assume the title of "Doktor."

Salaries

The salary paid to assistants here is slightly lower than in England. The apprentice receives no salary whatsoever, unless the proprietor gives him a little pocket-money on his own account. After taking his first examination and returning to the pharmacy for a further year, he usually earns

about 180m. per month (approximately nine pounds in English money). During the next period, after the university course, the salary is either between 220-250m. or 250-320m. per month, according to whether the pharmacy is in a large or country town. After making application for probation, the salary may slowly rise to 400m. per month, but this is the maximum. On the sum of 400m. per month the tax alone would be 30m., apart from a number of compulsory health and insurance contributions.

Hours

Pharmacies, as a rule, open at eight o'clock in the morning and close either at six or seven o'clock in the evening, according to the town and neighborhood. There is no late closing on Friday or Saturday, but it must also be mentioned that there is no half-holiday. Each pharmacy has to take a rota and give service all night should occasion arise. This is exactly the same with regard to the Sunday service. Usually three-quarters of an hour is taken for lunch, with no tea-time. Life in a pharmacy here is very interesting, only pure pharmaceutical business being conducted, and no sidelines are attempted whatsoever. No displays are made either in the window or internally.

State Control

All pharmaceutical businesses are State-controlled, similar to other continental countries. It is quite impossible to open a new business or to sell without first making a Government application. In the case of selling, the purchaser is invariably the German Government itself, in which case a manager is placed in the business under a nominal salary with a small commission. Should occasion arise that a pharmacy is required in any district, the Government advertises for application for this new business. However, this is but a very rare occurrence.

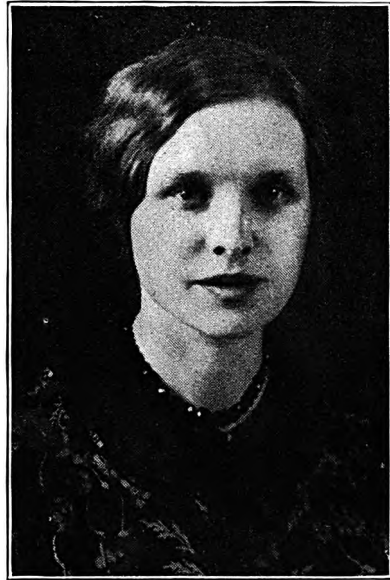
The price charged for a prescription is always the same in all pharmacies, so that it would not matter whether it was taken to a business in a poor or high-class district. The cost of the preparation would always be ascertained from the *Rezeptur Preisliste*.

Taking into consideration the above-mentioned particulars, one can see that pharmacy as a profession in Germany is so far removed from that in England that it is practically impossible to make comparisons between the two.—*The Pharmaceutical Journal and Pharmacist*.

NEW FACULTY

Though needing no introduction to some of us and that includes more than the girls in our school, we wish to introduce to the School of Pharmacy, Miss Cecelia S. Kranaskas, B.S., in pharmacy. Miss Kranaskas acts in the capacity of graduate assistant in pharmacy. Besides this duty, she is enrolled in the graduate school, taking a course in chemistry given by Dr. Gruener and in the pharmacy school, taking analytical pharmacy from Prof. Davy.

The state of West Virginia can boast of claiming to be the home of Miss Kranaskas. Having received her high school education in Thomas, West Virginia, she graduated from the University of West Virginia in 1928. Since then our new instructor has until this fall been employed in Williamson and in Kingwood, West Virginia.



Members of the Junior class are quite familiar with this man, but we take great pleasure in introducing to them and to the remainder of the student body, J. Raymond Rankin, B.S., our new assistant in pharmacy.

Mr. Rankin comes to Western Reserve from the Ohio State school of pharmacy, where he received his degree last June. Previous to his college training, he attended Bellaire High School, Bellaire, Ohio, entering State in 1925.

In addition to his duties in the pharmacy department, Mr. Rankin is enrolled in the graduate school, and at the present time, is taking a course in bio-chemistry. Chemistry, it appears, is the new assistant's "long suit," for he majored in this science while fulfilling the requirements of the State University.

Besides holding a membership in the Ohio State Pharmaceutical Association, Mr. Rankin is connected with the Phi Rho Alpha fraternity, a state honorary pharmaceutical fraternity which selects for its members persons of high scholastic standing.



ALUMNI

THE ALUMNI BANQUET

By Robert M. Porter

Hats off to Bill Hosler and his cohorts! To be sure, the Alumni Banquet, held at the Acacia Country Club on the evening of June the 12th, 1929, was the biggest and best banquet of its kind in the history of the School of Pharmacy.

The Committee is to be commended on the way every one entered into the spirit of mirth and frivolity. Well, what say, let's follow the night through from beginning to end. Those of you who were there will recall the balmy country air that stimulated every nerve center in your anatomy as you drove up that winding drive, "just about the time when day was almost done." Then, of course, there was that long wait for the appetizing meal which followed—a long wait only because that good old country air just tantalized one constantly.

Lest we recall that enghungered feeling too clearly, let us now place ourselves at the table and appease our appetites a bit. Do you recall how Bill Hosler got off his Will Rogers' "Dope." We always did suspect that Bill had a longing to make Hollywood and drop his ditties carelessly among the "Stars," but never did we realize that he had such good credentials. To be sure, he made a fine toastmaster. Bill had the spirit of the evening, and he was there to broadcast it to his friends. To tell the truth, the first time the Class of '29 heard Bill talk he spent a whole half hour on ACACIA and its value to the Pharmacist.

Many of us still recall the words of Dean Spease and his advice to the about-to-be-Newlyweds. Quite especially the introduction of his esteemed friend, Dr. Paul G. Albrecht. Many of you older fellows remember Dr. Albrecht. Believe us or not, "Doc" has the Old Reserve Spirit running through his veins, and we did enjoy having him with us.

Another old friend of the School again caused us to feel the warmth of his heart. Who? Mr. E. R. Selzer, the man who keeps open all night at 105th Street corners, serving our University Circle as the Apothecary did of twenty years ago, to say nothing of his sustaining malted milks so heartily

enjoyed by the night-faring students of Western Reserve University while waiting for a 2:00 A. M. car. It was Mr. Selzer, by the way, who made Acacia Country Club available for our use.

Many other old friends were there: Fred Cermak, Herbert Decker, Fred Nevel and Carl Winter, and we will be looking for them again next year.

Now—on with the dance—and don't forget Sammy Cohen and his solo dance. That music just made every one forget his troubles, and a Kappa Psi actually traded dances with a Phi Delta Chi. Don't get excited! That was just the year's climax of fraternal altruism that is being fostered at Western Reserve University School of Pharmacy.

And now, we trust that that homogeneous mixture of friendship will hold us all together until we again subject ourselves to Acacia's power.

Mr. William W. Hosler, formerly an instructor in pharmacy in the School of Pharmacy, has accepted a position as Director of Laboratories of the Miller Wholesale Drug Company and Perscription department of the Miller Drug Company, Inc. We are sorry to lose Mr. Hosler from our school but we wish him the best of success in his new undertaking, and hope that he will come back and visit us most frequently.

ALUMNI

Are you interested in buying a drug store? We frequently hear of stores that are for sale and during the past three months three of them have been brought to our attention. If this appeals to you won't you come and see us?

Would you like to change your present position? We are constantly receiving requests from drug stores for men for relief work as well as regular full time work. Some of these positions have been unusually good ones. We hesitate to notify our alumni who are already placed. We should be very glad if our alumni would keep in touch with us and let us know whether they are interested in a change or in buying a store.

AMONG THE ALUMNI

(By Maurice H. Cole)

BARNEY DOBRIN

Perhaps no person is more interested or has worked harder for the advancement of the standards of the Pharmaceutical profession than Barney Dobrin. Mr. Dobrin, who graduated with honors from Central High School in 1918, a year prior to entering the School of Pharmacy of Western Reserve University, received the Ph.G. degree in June 1921. In that same year he passed the Assistant Pharmacist's Examination, receiving the highest grade of the state.

Mr. Dobrin, who has been behind the drug counter for more than fourteen years, has been the proprietor of the Dobrin Pharmacy at 7228 Kinsman Ave. for five and a half years, during which time he has acquired a wonderful reputation among the physicians and patrons as an ethical pharmacist, conscientious of his work and his responsibility.

The Dobrin Pharmacy is a clean, large and airy store, supplied with adequate lights to produce a pleasing effect; more than that, the stock is attractively arranged and the clerks are helpful and courteous, which makes this pharmacy a desirable place to purchase one's needs.

Mr. Dobrin is an active member of the O. S. P. A., N. O. D. A., and the A. Ph. A. and gives much of his time in campaigning for such things that the pharmaceutical profession might need or desire. He believes that one has but to consider his responsible position in the community and the helpful scope of his profession, to realize sincerely that no profession carries with it such a demand for skilled and trained men. This diligent alumnus can well be classed as one of Cleveland's foremost successful Pharmacists of whom the school can feel proud.

**RESULT OF THE STATE BOARD OF
PHARMACY EXAMINATION ONE
HUNDRED PER CENT**

As a result of the Ohio State Board of Pharmacy Examination held in Columbus on June 18, 19 and 20 the following students of Western Reserve University were granted Pharmacist Certificates: Ralph W. Blakeway, Milton E. Geiger, Isadore Goldfarb, Gertrude Horsch, G. Richard Koch,

Alvin H. Kuttler, Joseph W. McElroy, Vincent P. Maddalena, Max M. Riemer, Maurice Schoenberg, Roy I. Scott, Carl J. Shane, and Paul S. Steidl.

The following were granted Assistant Certificates: Sam S. Cohen, Joseph C. Eisenberg, Walter J. Holmok, John B. Kalasinski, Myer L. Karner, Samuel Lester, Lon G. Lyman, Julius J. Miller, Robert M. Porter, Philip Saginor, Clarence A. Speice, and Edwin H. Whittaker.

DEAN LEUTNER SPEAKS

Winfred George Leutner, Ph.D., Dean of the University Administration, was the speaker at the second weekly assembly, Thursday, September 26. Although his interests must be divided among all the departments of the University, the Dean presented a talk which centered around pharmacy and which created a great deal of interest among the student body.

He emphasized the necessity of a good Pharmacy School, and praised this department for the excellent standards which it maintains. However, he stressed that the aim of the school is not to teach routine alone, but to develop for its students a philosophy of life, a personal code which will inspire them to greater heights. If routine is all that we are striving for, we would derive more benefit if the apprentice system were again brought into vogue.

To quote the Dean: "If the science of pharmacy were content to teach routine only, the science of pharmacy would be relegated to things that have died, and the University would have failed in its purpose to create a philosophy of life and living, and a point of view which will make university life worth-while." In the same connection, a child's pictures of the man he would like to be at the age of thirty-five, fifty-five, and seventy-five served well to impress the thought upon the minds of those present.

Concluding, Dean Leutner stated that in addition to the other ideals of the University, the development of real scholars enjoys a very prominent position. Pioneers who are willing to brave new fields, "who are willing to sail into the West in search of a short route to India," are always more than welcome in the institution, and the University is always eager to aid in developing a manifestation of such zest.

The Reserve Pharmacon

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Pharmacy by the Students of the School of
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REPORTORIAL

Jerome Adelstein, '31	Myer Karner, '30
George Breuhler, '31	Robert Kumpf, '31
Maurice Cole, '30	Russell McArtor, '32
Abe Harris, '30	John Shimko, '33

BUSINESS

Alex Celke, '31
Bertha Grosser, '32
Karl Schweickardt, '31

VOL. 3 WESTERN RESERVE SCHOOL OF PHARMACY NO. 4
Cleveland, Ohio October, 1929

EDITORIALS

Cultivate The Habit!

During these opening weeks of school complaints have been heard from various members of the freshmen class regarding the length of home-work assignments and the promptness with which they are made. The same has occurred each year in the past, and the same will occur each year in the future. In fact, the faculty and upper-classmen would be disappointed were the wails of the freshmen lacking.

However, Freshmen, stop and ponder the question for a moment. Is it that your professors and instructors want to burden you with superfluous tasks, fill your college days with drudgery rather than enjoyment? No, absolutely no. No one in college would rather see you have a good time than your educators. But, you must remember too that the old adage about "too much work

and no play" may also be reversed. What your professors are doing is for your betterment. Whatever your learning power may be, they are endeavoring to increase its capacity—make it approach the highest peak of efficiency—cultivate within you the habit of study.

The path before you is rough. Those ahead of you have discovered this fact, and, in order to experience any degree of success, you must have, in addition to other things, some system to your methods. Gradually, then, through what may appear to be impossible assignments, you will accustom yourself to the task which lies before you, and that which is difficult and lengthy now will be easy once you acquire that habit so necessary to a fruitful college career—study.

Fitch.

GIVE A MAN A CHANCE

In the two years and part of a third that I have been a student at the School of Pharmacy one of the subjects stressed by all instructors has been cleanliness and neatness in all pharmaceutical work. It seems to me that to do this one should begin with himself and what a problem that is—especially on those 8:00 A. M. to 4:00 P. M. days—without a place to wash except in the laboratories and then without soap or towel. Of course, we men students have a rest room in the "Dorm" building and a wash stand in the basement of the Pharmacy building but no soap or even paper towels. To supply these necessities in the form of a liquid soap container and a rack of paper towels would mean an outlay of only a few dollars which would be well spent and thereby give the students a chance to show the instructors that some of their teachings are put into practice.

DOES IT PAY TO ROB PETER TO PAY PAUL?

Does the average student really gain anything by working while he is going to school? This is a question which has been argued pro and con during the past and no doubt will continue to be the cause of many arguments as long as there are schools and places to work. It is the writer's purpose to show by the following figures that it is a poor policy on the student's part to work the hours that many do while attending school. These figures are all kept within a minimum. 168 hrs. per week.

25 hrs. in class rooms

34 hrs. (2 hrs. per subject) in study (Laboratory work not included)

4 hrs. study of laboratory methods

10 hrs. (1½ hrs. per day) for meals

9 hrs. (1½ hrs. per day) traveling to and from school

56 hrs. (8 hrs. per day) for sleep

139 hrs. total

29 hrs. per week left for work and diversion

Now take in consideration the average time a student working outside of school puts in on the job. A low figure is 15 hrs. and some work as many as 25 hrs. (averag-

ing 20 hrs.) ; this leaves him all of 9 hrs. he can call his own for personal pursuits and pleasure. Summing this up it is obvious that he will either neglect his school work or his sleep in order to hold to this schedule for it is a well known fact that any budget system needs something to come and go on and 9 hrs. is a pretty slim margin. Does it pay to rob Peter to pay Paul?

STUDENT PARKING

Parking privileges for student cars are limited to the large parking space on the campus and to the streets in the vicinity of the University.

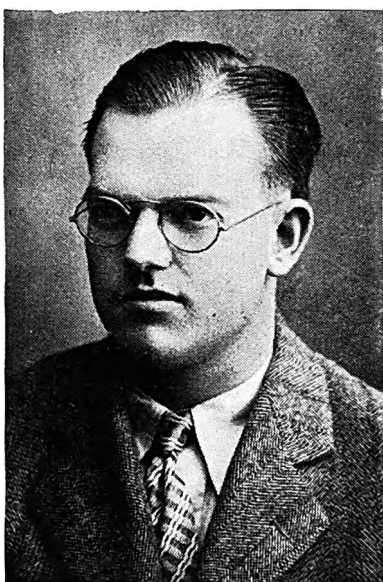
Lately, some of the students of the pharmacy school have over-stepped these bounds, parking their automobiles in the small area south of the Pharmacy office. Despite the fact that a sign states definitely that this section is reserved for the faculty, some members of the school insist on trespassing. True, this is not such a serious offense, but in many instances it causes unnecessary difficulties which may be avoided if each driver among the student body will show a little respect for the rule.

Government authorities at Port Nolloth are installing an X-ray machine in order to locate diamonds swallowed or concealed beneath the skin of those attempting to smuggle them out of the Union of South Africa.

PERSONALS

Alexander Edmund Celke almost missed the Adelbert Flag Rush. When he arrived at the gate, admission was ten cents, and Alex almost wept when he thought of the four coppers in one pocket and the hole in another. He was saved, however, by another embryo pharmacist who kindly loaned him the necessary six cents.

"Ott" Wolfert's Ford roadster will do sixty any day of the week providing forty are up and down.



WILLIS DILLON

ANNUAL SCHOLARSHIPS

Mr. Willis Dillon, of Carrollton, Ohio, won the scholarship at the School of Pharmacy this year by examination. The value of this is the tuition fee of \$300, which upon the completion of satisfactory work during the three succeeding years, will be renewed, meaning the scholarship has a total value of \$1,200.

Mr. Dillon was born at Fairview, Ohio. He attended South High School in Akron and was graduated from the Carrollton High School in June, 1923. While in high school he was president of a literary society and editor of the high school paper, "Black and White."

We wish to congratulate Mr. Dillon and hope that he will continue the good work, for we are expecting great things from him during his career at the School of Pharmacy.

The scholarships awarded annually by the Executive Committee were won this year by Russell McArtor of the Sophomore class, Robert Fitch of the Junior class and Edward Paley of the Senior class.

PROPRIETARY MEDICINES MUST BE LABELED WITH CARE

A far reaching decision on the labeling of medicinal preparations has been handed down by the U. S. Court of Appeals for the Ninth Circuit. According to the decision, the use on labels of medicinal preparations of language which, when read literally, is not a statement of curative therapeutic properties, but, owing to attendant circumstances, may be understood as such, brings these labels within the scope of the Federal Food and Drugs Act just as definitely as if direct statements appeared.

This decision was made upon appeal by the U. S. Government from a judgment entered in the District Court for the Western District of the state of Washington, dismissing a case brought against certain medicinal preparations which the Government alleged, bore false and fraudulent therapeutic claims on the labels. The Federal Food and Drugs Act, under which the action was brought, is designed, among other things, to prevent the sale in interstate commerce of medicinal preparations bearing false and fraudulent statements concerning their efficacy in treating disease. The lower court dismissed the libel on the ground that it failed to allege facts sufficient to show a violation of the law, in that the statements on the labels to which the Government took exception were not therapeutic or curative claims but were merely reports indicating that physicians had obtained favorable results from the use of the nostrum, each "report" being preceded by the statement, "We have received many letters from physicians reporting."

The Circuit Court of Appeals, however, held that language such as that used would tend to engender a belief on the part of possible buyers that the use of the preparations would afford relief. "Unless we discredit their mental competency such, we must presume, was the intent and expectation of the proprietors," said the Circuit Court. "Their contention is that they have such letters or reports and that fact constitutes a competent defense, whatever may be the character of the drugs. But if, as is alleged, the drugs are worthless the proprietors cannot escape responsibility by hiding behind the phrase 'the doctors say'. Couched in such language undoubtedly the printed matter makes a more persuasive appeal to

the credulity of sufferers from these diseases than if the representations thus implied were made directly upon the authority alone of the proprietors, and for that reason they are not less but more obnoxious to the law."

Furthermore, the court held that the following principle of construction set forth in an opinion of the Supreme Court rendered in a case against vinegar brought under the food and drugs act is conclusive in this case also: "The statute is plain and direct. Its comprehensive terms condemn every statement, design and device which may mislead or deceive. Deception may result from the use of statements not technically false or which may be literally true. The aim of the statute is to prevent that resulting from indirection and ambiguity, as well as from statements which are false. It is not difficult to choose statements, designs and devices which will not deceive. Those which are ambiguous and liable to mislead should be read favorably to the accomplishment of the purpose of the act."

NINE METALS IN BODY OF A CAT

Tradition credits a cat with nine lives, but it remained for Joseph J. Laige, graduate student at the University of Detroit, to discover that a cat also has nine metals in its body.

Laige detected the presence of iron, manganese, lead, copper, potassium, sodium, magnesium, calcium and nickel, in the ashed remains of cats. His experiments were performed in the U. of D. biological laboratory in preparing his Master of Science thesis under the supervision of Prof. Richard A. Muttkowski, Ph.D., head of the biology department.

The practical significance of these determinations lies in the contribution made to a long-standing controversy. Scientists never have agreed whether metals were valuable or detrimental to living things. The copper compounds have been held to be particularly dangerous, though a French scientist, Galippe, fed copper to himself and friends experimentally without pernicious effect.

Within the last decade other French scientists have successfully introduced nickel into the human system and in many cases effected a cure for diabetes. American scientists, through a series of chemical precipitations, have found that copper is an important element in the formation of the

hemoglobin or red pigment of the blood.

It is a well known fact that iodine, though there is not more than one-fifteenth of an ounce in the human body, is a necessary prerequisite for life. If the thyroid gland, which secretes iodine, is removed, death will ensue within three or four months, although this gland contains but one-fifteenth of an ounce of the secretion.

With these facts as a background, Laige conducted a series of investigations which show beyond doubt the presence of metals in living organisms and which indicate that introduction of metals into the human may be invaluable in restoring chemical balance and curing disease.

To prove his contention, Laige selected a kitten and a full-grown cat as subjects for his experiments. The animals were dissected and the different organs separately ashed.

Minute quantities of nine different metals were found. Of particular importance were the discoveries of manganese, lead and copper in the liver, and copper in the pancreas of both the kitten and the cat. In addition, lead was found in the kidney, nickel in the brain and copper in the blood of the mature animal.

The significance of these discoveries and the sources of the metals are not clearly understood. However, if, as recent developments have shown, it is quite true that copper may affect the production of hemoglobin in the blood, nickel cure diabetes, and iodine prove a necessity for life, then it is only natural to deduce that other metals have an important function in stabilizing the human system.—*Edward J. Beck.*

ATHLETICS FOR PHARMACISTS

I have often been asked why the students of our pharmacy school are so averse to athletic activities. In fact, the intramural department of the University has wondered why we, with so large a number of eligible candidates from which to choose, have had such poor participation in this field. In spite of the fact that the school holds two championship cups and three runner-up positions in basketball, we only had five members on our last year's team. In addition to this, our baseball teams in the last three years have been undefeated. We have beaten teams from Adelbert and also hold a victory

(Continued on page 20)

FRATERNITIES

KAPPA PSI NEWS

The opening of the fall session brought back a group of active members ready to start the new year with the aim of getting something accomplished. Most of these fellows spent the summer months working in drug stores, and others elsewhere as was the case. All of them brought news of an enjoyable vacation and are apparently ready to start another school year. Those who have returned are: Brothers Valway, Celke, Whittaker, Fitch, Wolfert, Phillips, Cullinan, G. Novatny, Rehburg, Schweickardt, Lager, McArtor, Lauria, and Hoefer.

These men immediately organized and through the efforts of all, the usual smoker was held on the night of the opening day of school. A large attendance, including a number of the faculty and some new men, enjoyed the evening at cards, etc. This event enjoyably served its purpose of bringing the fellows into closer co-ordination and to introduce and make friendly the new faces that appeared.

We are disappointed not to find in our midst Brothers Blakeway, Aldrich, Porter and S. Novatny, who graduated last spring. These men were all very active in the fraternity and in school work in both business and social affairs. We feel that if they continue as earnestly in their work as they have here, that they will have no trouble in obtaining the things which this earth offers them. We offer them hearty congratulations and give them our best wishes for future success.

Beta Beta is glad to welcome Brother Wells who has come to Western Reserve University this year from the Cincinnati College of Pharmacy. He is a member of Kappa Psi.

KAPPA PSI ALUMNI

Brother O. J. Carner has recently accepted a position in the Purchasing Department of the University. He was formerly Assistant Pharmacist at Lakeside Hospital.

Brother Porter is now the Assistant Pharmacist at Lakeside Hospital.

Brother Aldrich is located at the Marshall Drug Store at Euclid Avenue and East 105th Street.

Brother Blakeway is at Speers Prescription Pharmacy on St. Clair Avenue and East 93rd Street. He expects to take the New York State Board Examination and then enter a store in that state.

Brother Geuss is attending Northwestern University at Chicago this year.

Two of the above mentioned Brothers—Porter and Aldrich—joined the ranks of the newlyweds this summer. The former Miss Alice Peterson is now Mrs. R. M. Porter, and Miss Catherine Roehler decided that she would like to be known as Mrs. M. W. Aldrich.

Mr. Porter—"This steak tastes queer."

Mrs. R. M. P.—"I can't understand it, dear. I did burn it a little, but I rubbed Unguentine on it right away."

KAPPA EPSILON NEWS

Our girls are becoming educated. Gertrude Horsch attended summer school at the University of Michigan, and Bertha Grosser at our own W. R. U. summer school. (What is this world coming to?)

Emma Pejsa, who received her Ph.C. degree last June, is now attending the University of Michigan working for her bachelor's degree.

Lucille Bickford spent her whole summer up in Bay View, Michigan.

Ruth Kotershall spent a splendid two weeks in the New England states.

Ruth Pirson, who on the 13th of June became Mrs. Lyle Matheson, is now living in Akron.

We are glad to welcome back Ethel Kolozsvary, who spent last year working at the Gegenheimer Drug store.

PHI DELTA CHI NEWS

Alpha Alpha chapter of Phi Delta Chi starts the year of 1929-1930 with thirteen active men. We regret the fact that we lost nine of our men last year by graduation. June saw most of these fellows scatter to many points.

Brother Baldinger has accepted an appointment as instructor of pharmacy at the University of Notre Dame, in South Bend, Indiana. We wish him much success.

Brother Kessler is employed at the Miller Drug Store at Shaker Square.

Brother Schreiner is with the Standard Drug.

Brother Shane is located in his home town of Canton with Roth and Hug. Several of the graduates are back in school this year as candidates for the bachelor's degree.

During the past three months Lawrence H. Baldinger and Donald English entered the realms of matrimony. To them go heartiest congratulations from the chapter.

In July, the executive committee of Phi Delta Chi fraternity met at the Breakers Hotel at Cedar Point. Several movements were made for the good of the organization which will be put before the Grand Council at Minneapolis in February.

Alpha Alpha held a special smoker at the chapter house on September 16. We were honored by the presence of Dean Spease, Prof. Davy, Dr. Bacon, Prof. Edwards, Prof. Wagner and Dr. Lankelma. Several of the alumni were present also, including: Brothers Chase, Highland, Gilbert, Steidl, Ischie, Schreiner, Sanger, Wargell, English and Kessler.

Brothers Steidl and Gayok are with the Day Drug Company in Akron.

ALPHA ZETA OMEGA NEWS

Various notables of the Alpha Zeta Omega fraternity have vowed to love, honor and obey; among those recently are fraters Louis Cressel '24, Jack Baskind '23, and Rueben Green '25. Others of the boys who are ambitious along that line but have not yet achieved that notable distinction are fraters Max Weinberg '23, Jack Franklin '26 and Melvin Matyas '26.

A few of the old guard are still plugging along at school. Frater Morri Klein (et

wife) is attending medical school at the University of South Dakota. Frater Max Cohen is in attendance at the University of Baltimore—medical school—where he is progressing with his usual scholastic ability.

Fraters Jack Franklin and Phil Leiberman are now owners of the West Fourteenth Drug.

Norman "Schultz" Weintraub of cornbeef fame complained that he is troubled refilling orders for that well-known Panacea "Herb-O-Life." Its action is symbolized by the two lines "It makes the old young, It makes the young strong."

Frater Dave Cohen is now one of the partners in the Uber-Cowan Pharmacy.

Morris Spiegel '26 is working as an executive in the well-known Weinberger chain.

Frater Max Reimer is now at the Rand Cut Raters.

At present S. S. Cohen is assistant manager of the Yale Drug store.

At the last annual convention of the Alpha Zeta Omega fraternity several members of Theta were honored; frater Roy Scott who has put himself to the front in various pharmacy activities both athletically and socially, was elected Supreme Director of Alpha Zeta Omega. Milford Harris, who sports a B. S. was honored with the office of Supreme Signare.

During the summer the boys were very active acquiring coats of tan and new date books at the fraternity cottage on Lake Erie. Our present location is 10403 Euclid Avenue.

An introductory smoker was given at the Statler by Alpha Zeta Omega welcoming the new pharmacy students to Western Reserve University. Another smoker was given at Wille's Dance and Dine in celebration of the engagement and nuptials of the afore mentioned A.Z.O.s.

Frater Albert Fine '28, is now employed at the Marshall Drug.

Frater William Zellman is an employee of the Standard Drug.

He—"I suppose you started at the foot and worked your way up?"

Prosperous Old Gent—"No— I started at the foot and stayed there—I'm a chiroprapist."

—Florida Times-Union.

IN MEMORIAM

HAROLD F. KREWSON

Harold F. Krewson, one of our most promising Juniors, died at St. Joseph's Hospital, Lorain, on the 22nd day of August, two hours after having been injured as a result of a fall from a truck. He was working on a road construction job during a part of his summer vacation.

Before entering Pharmacy School Krewson had spent three years in Adelbert College and was well prepared to take up his pharmaceutical training. Because of his quiet diligence and unassuming demeanor he was held in the highest esteem by both the student body and his instructors. He played in intramural athletics and was pledged to Kappa Psi fraternity.

Besides his parents and younger sister Krewson is survived by two older brothers, Dr. A. L. Krewson, who captained the Western Reserve football team in 1922, and Arthur E. Krewson, who was graduated from this school with the B.S. degree in 1925.

SAMUEL KRENITZ

Samuel Krenitz, an alumnus of this school, passed away suddenly on the 30th of August, having been stricken with acute

leukemia only a few days previous to his death. Painstaking and earnest in all his efforts, well liked by his fellow class-mates and esteemed by his instructors, he had won an excellent reputation in our school.

Krenitz earned his B.S. degree in 1927, and then matriculated in the W. R. U. School of Medicine where he soon became an honor student with high prospects of a very successful career before him. He was a member of Alpha Zeta Omega and Phi Lamda Alpha fraternities.

"REST IN PEACE, MY FRIEND"

I can't forget—'Twas yesterday
We saw your friendly smile,
A hearty handclasp was your way
Of saying, "Stop Awhile."

A pat upon a back was how
You always said "Hello";
And did your duties like a man,
That's why you had no foe.

Oh, better men I know we'll be
For our friendship to the end;
A prayer from hearts of brothers true,
"Just rest in peace, My Friend."

—*Alfred Baskind.*

(Continued from page 15)

over the Parke-Davis team from Detroit. Yet last year we had no entry in the indoor baseball league.

Of course, even if our students cut out athletics entirely, the school would still exist. But this bemoaning predicament is even more sorrowful because we have the talent and the ability to produce championship teams. This not only helps to boost our school, but it also proves very beneficial to the students themselves.

Considering the fact that a student is occupied all day at school and then spends the evening in study, it is plain to see that he devotes very little time to good, clean sport. It is needless for me to tell you that the exercise derived from any sport will do a world of good.

My object in writing this article is not to advocate physical culture. I am not particularly interested in whether or not this school will develop athletic experts. But I do think we should have athletic representation. There is no reason why, out of a total of one hundred and twenty odd students, we can not have a basketball squad of ten men, a baseball squad of fifteen men and a few tennis players and volley ball teams. There should be at least one or two of our students represented on the University football team.

Our students usually give the old excuse—work. Any student who works every night during the week is certainly depriving himself of a great deal in order to earn a few dollars more. Everybody should have at least one or two nights a week free. Beside the relaxation offered will certainly allow the students to function more efficiently in his school work. You know the adage about all work and no play making Jack a dull boy.

Not only will attendance and participation in athletics help in this way, but it will also instill pep and a fine spirit among our students. Sad to relate, we have always been a rather dull bunch. School in the morning and afternoon, and work at night—they are the causes of our dullness. We need pep and plenty of it. I know that this spirit is present among our group. All we need is something to bring it out. I need only to ask you to look back and revisualize our trip to the Parke-Davis plant and my point is proved.

To the freshmen belongs the privilege of taking up the old traditions of the school. When the call is out for basketball let's have everybody out. Don't forget that all receive an equal chance. In closing I hope that this year will be a banner year for pharmacy athletics. We should have a championship team. We have the material and ability so, Pharmics, let's go, and help put the school in the limelight where it belongs!

—Myer Karner.

Lager—"Next to a beautiful girl, what do you think is the most interesting thing in the world?"

Webb—"When I am next to a beautiful girl, I'm not worrying about statistics."

Mrs. Dimpleton (to our distinguished Dean of Pharmacy School)—"Your school is difficult to get into, is it not?"

Dean—"It is considered so, madam. An early application is most advisable. Do you wish to enter your boy?"

Mrs. Dimpleton—"If it is a boy."

Officer—"You'll have to get out of here. I've been watching you for the last half hour."

Philips—"But officer, we haven't been doing anything."

Officer—"I know it. Then why are you crowding up this parking space?"

—Missouri Outlaw.

Prof. Finrock—"If a child is born within the three mile limit, it belongs to the United States."

Kroger—"Gee, I thought it belonged to its mother."

—Arizona Kitty-Kat.

Coroner—"And what were your husband's last words, madam?"

Widow—"He said, 'I don't see how they make much profit on this stuff at a dollar and a quarter a quart.'"

—Brown Jug.

"Something I ate, no doubt," murmured the circus fire-eater, as he suffered a touch of heartburn."

—Texas Ranger.

Doctor—"Let me feel your pulse."
 Meek Sixteen—"Oh, doctor! That's the way you all begin."

—*Ollapod.*

Herr Polt—"Tell me the name of a German philosopher."
 Obester—"Can't, sir."
 Herr Polt—"Das ist Recht."

She—"I suppose you are on the football team?"

He (proudly)—"Well, yes; I do the aerial work."

She—"What is that?"

He—"I blow up the footballs."

—*Lafayette Lyre.*

She—"I would like to get into the movies."

Producer—"Well! Well! Sit right down and take off your things."

Phi—"Florence has the biggest Hispano-Suiza I have ever seen."

Psi—"Yes, I know, and she will wear those tight dresses."

—*Ghost.*

Proud father—"Necessity, my son, is the mother of invention."

Son—"Oh, I see. But who was the father?"

Proud father—"Why, he was—er—, oh, yes, he is Pat Pending."

She—"I've just became engaged to an Irishman."

He—"Oh, Really."

She—"No. O'Reilly."

—*Anherst Lord Jeff.*

Miss Rx—"If you keep looking at me like that, I'm going to kiss you."

Mr. Rx—"Well, I can't hold this expression much longer."

—*Tit-Bits.*

Ed—"How's your new girl?"

Bill—"Not so good."

Ed—"Gee, Bill you always were lucky."

Frosh—"Didja take your girl home last night?"

Soph—"Naw, I left 'er at her house."

—*Pitt Panther.*

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The Reserve **Pharmakon**

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J. J. S. 1930

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Another New Building For Pharmacy

Ohio State University will soon have Up-to-date housing facilities for its work in
Pharmacy and Bacteriology

Seldom does a more auspicious gathering of pharmacists take place than that held on the 16th of October, 1929, when nearly 200 people met at a testimonial dinner given in honor of Dean C. A. Dye of the College of Pharmacy of Ohio State University. The occasion was sponsored by both the Ohio State Pharmaceutical Association and the alumni of the State University in recognition of Dean Dye's instrumentality in bringing about the erection of a new building, which will be ready for occupancy this fall, and also for his long and efficient services rendered within the field of various pharmaceutical activities.

It seems particularly appropriate that Dean Dye should have been honored in connection with a celebration over a new pharmacy building at Ohio State, for it has been the privilege of few men within the pharmacy teaching field to have a more genuinely loyal body of former students. To verify this statement, one has only to bring the matter up before any graduate of the O. S. U. college of pharmacy during the past three decades. His intensely human qualities have won for him the love and affection of all who sat under him as students; his genuineness and unpretentiousness have gained for him the respect and admiration of all who know him.

In a well prepared paper read before the assemblage Dean Dye, in characteristic mode, paid tribute to those who helped make the building for pharmacy and bacteriology a reality. After indicating the nature of the handicap which had been imposed upon the College of Pharmacy through lack of housing facilities and equipment, he outlined the history of the efforts which have been made over a period of years to get proper acknowledgment of pharmacy's needs.

We venture to quote, verbatim, three excerpts from Dean Dye's address which we feel are of especial significance:

"Certainly the fact that the president and trustees of a great university, as well as the governor of a great state, recognize the value as well as necessity of providing the building and equipment for carrying on higher training for pharmacists will make it easier for other schools to do so." * * *

"Already there were not only too many pharmacists, but also too many stores. The problem, therefore, seems to be, to in some way try to reduce both. We felt that the short course was in a measure partially responsible for the conditions. Not only this, but we could not but feel that as an educational measure the short course failed to measure up to either the best pharmaceutical or educational ideals. It possibly had served a purpose in the earlier periods of its existence, but it certainly had outlived its usefulness." * * *

"Relative to the universal adoption of the four year requirement there has been much criticism and those of us engaged in educational fields have been described as visionary, impractical, and even of unsound mind for urging and adopting such standards.

"Naturally, pioneering of any sort is often discouraging, whether it be in education, discoveries in science, in medicine, or even in penetrating new continents. Always one or more persons will rise in opposition and try to prove that we are all wrong. History is full of such instances. In the face of all this opposition, however, Pharmacy has made progress educationally, professionally and commercially. And now that we have these things to our credit how many would be willing to go back to the time when educational standards were a myth, when our stores were lighted by oil

lamps, and of business methods there were none? The answer is self-evident.

"It has been but a short time, as time is reckoned, since one could become a registered pharmacist after having enjoyed but a few years of liberalizing influence of the public schools. And it has been a much shorter time since it was even thought worth while to require students in Pharmacy to have even a high school training, much less compulsory college training. As a result we find present day conditions in Pharmacy, not what they should be and if we look for the cause we shall find the underlying influence largely the result of a lack of ideals and a too highly specialized training built up on a weak foundation.

"Some, no doubt, will ask: Why require all this educational training in Pharmacy? To answer this question would require more time than is allotted to me. However, we must admit that there is still some Pharmacy practiced in almost all stores, and that in many others it is one of the chief features of the business. Moreover, if we may judge from the experience and statements of those who know, the pharmaceutical side of the business may be materially increased with profit. This being true we must train our students to meet the maximum rather than the minimum requirements. Then if one wishes to combine the merchandising feature with the pharmaceutical, the training will not only not prevent, but be of great help. As you well know, there is not only a distinct commercial value but also a very high measure of respectability attached to the name "Pharmacy." To keep this there must needs be someone present who has the training necessary to meet the demands of the public.

"What Pharmacy needs is not less but a broader and better educational training so that we may develop a vocational morale and greater solidarity and higher ideals without which we cannot hope to attain the degree of success we deserve. We must, therefore, broaden and liberalize the training so as to produce not only good business men, but better pharmacists and especially good citizens. By so doing we shall be able to create a new pharmaceutical consciousness, and replace individualism with a professional solidarity and helpful fellowship. These, to me, are the essential ingredients in the prescription for our present-day conditions."

The School of Pharmacy of Western Reserve was represented at the dinner by Dean Spease and Professor E. D. Davy, both of them graduates of the State University College of Pharmacy and both formerly associated with Dean Dye on the faculty.

N. T. C.

THE FUTURE OF PHARMACY

Any follower of the science of Pharmacy can sense its present status amongst the professions. At the present time it is at its lowest ebb with divided hope for recovery. This condition has necessitated a "Back to Pharmacy" plea which every leader in the profession is strenuously advocating.

Many factors have contributed toward the degeneration of Pharmacy and the universal dissatisfaction amongst the co-workers in the science. Perhaps the most important is the trend towards commercialism. However there are others such as Prohibition, dispensing Physicians, long hours, lack of profit, too many undesirables in it that are incapable and unfitted for the work, the failure for its educational requirements to keep pace with those of other professions, etc.

I believe it can be said that discontent marks the originality of change. We are to have a change. That everyone will agree on. This change will determine the future of Pharmacy.

It would be a good plan to alter this chaotic condition of Pharmacy while it is yet in its infancy. It will require the whole hearted cooperation of Pharmacists, schools of Pharmacy and the organizations of Pharmacy. It will require the concession of many selfish methods of administering business among retail Pharmacists. It will require advertising both to the public and to the Physician to establish once more friendly relationships.

I believe that there are certain definite standards that will be necessary to help the "Back to Pharmacy" movement. My suggestions are as follows:

First—"The Pharmacist should have a certain amount of standing in the community, of responsibility and dignity obtained through service to the public." He can promote this by refusing to become an addict to

merchandising. By avoiding extraneous "pressure" in salesmanship. Diagnosing and prescribing should be entirely eliminated. Advertising whether by window display or print should be confined to pharmaceuticals and materials used in Pharmacy. The public should never be given a chance to lose sight of the ethics propounded in Pharmacy. The Pharmacist should be active in community work. He should keep abreast of the times by being continually informed on current events. It is necessary that he become a leader instead of a follower.

Second—It is indispensable for the Pharmacist to cooperate with the Physician. He should always give the Physician's orders due consideration. Instead of protesting against many of the unfair methods practiced by some Physicians he should overlook them and try harder to please them. Better results would be obtained by such a plan than are now realized.

Third—The relation of the Pharmacist to himself is worthy of consideration. He should never forget that service is one of the requisites in promoting good will between him and the public. Often this will require a little added effort on his part but it will pay. Neatness, politeness and unselfishness should not be considered of minute importance since they frequently form the basis by which the customer judges the Pharmacist.

Thus we see that if the Pharmacist is to retain this prestige that has taken several hundred years to create he must try different channels than the present ones or the slogan "Your Druggist is more than a Merchant" will soon be entirely mythical.

Brooke Phillips, '30.

IRRADIATED ERGOSTEROL

Within the last few years Vitamins has been one of the leading subjects in the field of clinical and chemical research. However, beyond the pharmacological and therapeutic action there is little known of vitamins. It has been found, and is now universally accepted that vitamins are necessary for the proper metabolism of the body, this being perhaps the reason for the extensive research in this field.

To the present time there have been six vitamins discovered and proven. Vitamin

A is known as the anti-ophthalmic vitamin, being used in the cure of an eye disease, Xerophthalmia. It is also a growth promoting vitamin, working in this phase with other forces in the body. Vitamin B is a specific for beriberi, a form of peripheral neuritis. Vitamin C is the anti-scorbutic vitamin, being used in the treatment of scurvy. Vitamin D is less covered with mystery than the others. It is known as the anti-rachitic vitamin, given in the treatment and prevention of rickets in children. Vitamin E acts much the same as a hormone to the reproductive functions. The sixth and last is so called Factor PP and is a specific in the treatment of Pellagra, a disease involving the nervous system, digestive tract, and the skin.

At this time we are interested in Vitamin D. It has been shown that Vitamin D is a necessary factor in calcium and phosphorus metabolism in the body. It tends to adjust the proportion of these minerals to that necessary for normal blood and bone tissue. Hence its use in the cure of rickets. Rickets is described as a series of symptoms caused by a deficiency of calcium or phosphorus, or a deficiency in the metabolism of these in the body, characterized by deficient and abnormal bone structure.

As was stated, Vitamin D is covered with less mysteries than any of the others. The recent discovery of the identity of irradiated ergosterol with Vitamin D is one of the greatest advances in vitamin research. Through this discovery came a more definite idea of its chemical nature and its physiologic functions. Ergosterol has been identified as its parent substance and may be converted into Vitamin D by irradiation with ultra-violet light.

In 1924 Steenbock and Hess independently reported that certain foodstuffs could be endowed with anti-rachitic properties by irradiation with ultra-violet rays. Further research showed that only lipid-containing foods were susceptible to this treatment, and furthermore that these properties belonged to the sterol faction of the foods. The first assumption was that cholesterol, which is widely distributed in the plant and animal kingdom, was the pro-vitamin substance. Research then showed that isolated cholesterol became antirachitic upon irradiation.

Later, Rosenheim and Webster reported that chemically pure cholesterol, on being subjected to irradiation, failed to become

antirachitic and concluded that it was some impurity associated with it that was the provitamin D. Finally through much research and use of the spectroscope it was shown that the substance responsible for the antirachitic effects was ergosterol which is found constantly associated with cholesterol.

Crude ergosterol was first discovered by Tanret, a French scientist, in 1889. His colleague, Gerard, studied the sterols in a number of fungi, finding that ergosterol was present also in yeast. Ergosterol is chemically related to cholesterol. It forms colorless, odorless, glistening crystals which rapidly turn to yellow unless extremely pure. When carefully dehydrated it melts at 166 degrees, while the hydrated form melts at 183 degrees. Pure ergosterol exhibits a specific rotation of -132 degrees with the sodium line. Upon the addition of concentrated sulfuric acid to a solution of a trace of ergosterol in chloroform, the sulfuric acid layer becomes bright red, the chloroform remaining colorless. In contrast, with cholesterol, the sulfuric acid layer takes on a greenish fluorescence while the chloroform layer turns red.

Ergosterol is widely distributed in small quantities. In minute quantity it is found in eggs, brain, liver, spleen, and overire of lower animals. All of the common vegetable oils contain it. It has been identified in the human blood, and its presence in the human skin is regarded as the basis for the beneficial action of sunlight and ultra-violet rays. Ergosterol is found most abundantly in the fungi, the commercial sources being ergot, mushrooms and yeast.

Yeast is the most useful source of ergosterol, but the amount present varies greatly. However, methods are being developed by which the ergosterol yield may be increased in the culture. A suitable yeast is taken and the lipoid fraction extracted with organic solvents. The solvent is then distilled from the extract, the residue saponified, and from the resulting soap the ergosterol is isolated and then purified by fractional crystallization.

Crude ergosterol does not exhibit the antirachitic properties that does that activated by irradiation. There are, however, a few exceptions to this rule. Cod liver oil contains both the inactive and the active ergosterol. The yolk of eggs also contains the inactive ergosterol and Vitamin D.

There are three general methods by which ergosterol may be irradiated with ultra-violet light. The first method is to simply place some crystals of pure ergosterol under a mercury vapor quartz lamp, magnesium spark, carbon arc or other source of ultra-violet light. This method is the simplest, requires the least equipment, and is the most widely used, but is the least effective in converting the ergosterol into Vitamin D. The chief objection to this method is that unless the action is timed just right there is danger of incomplete reaction, or if over exposed excessive decomposition will result. However, the resulting mixture of vitamin and resinous products is readily dissolved in oil, and exceedingly concentrated solutions may be obtained.

The second method is to dissolve the ergosterol in a volatile solvent such as ether or alcohol and then expose this solution to the action of ultra-violet light. The solvent is evaporated off, and the potent residue is then dissolved in the oil. This method is highly efficient in converting ergosterol into Vitamin D and is widely used in research on irradiation. However, it presents some apparent technical difficulties which prevent its being used commercially.

The third method is to dissolve the ergosterol in oil first and then subject it to the action of ultra-violet light. The oily solution is carried under the light in a thin film free from air. The oil prevents the decomposition of the vitamin by over exposure.

In all the three above methods the rays of ultra-violet light must be of certain wave lengths to obtain the greatest efficiency in conversion. When irradiated, ergosterol immediately begins to change to Vitamin D. This action continues to a certain point where the vitamin begins to be decomposed as fast as it is formed. The content of Vitamin D remains constant until the ergosterol is all converted, and then the vitamin is gradually decomposed if continued to be exposed. It can readily be seen then that the irradiation must be stopped at a definite point where a maximum content of vitamin is present. It has been estimated that at this point about ten per cent of the ergosterol is converted into Vitamin D.

Upon irradiation, ergosterol is completely changed chemically and physically. Its spectrum becomes similar to insulin and identical with that of Vitamin D obtained

from cod liver oil. Its chemical structure is changed but is as yet unknown. The melting point is lowered and the rotation gradually decreases, and prolonged irradiation produces a slight rotation to the right. Irradiated ergosterol is unstable, but dissolved in a vegetable oil it does not readily decompose.

Irradiated ergosterol is found on the market in two standard products. The first, Viosterol, is a solution of irradiated ergosterol in oil, one hundred times the antirachitic potency of standard cod liver oil. The oils used as solvents are arachis, sesame, sweet almond, and other similar bland oils. The name, Viosterol, was given to this product by the Council on Pharmacy and Chemistry of the American Medical Association. This preparation is put up in 5 cc. and 50 cc. vials. Each is supplied with a special dropper. The dosage ranges from five to twenty drops depending upon the indications of the specific case. It is given orally and may be mixed with milk or fruit juices if so desired.

The second product of the market is Viosterol Cod Liver Oil. This is ordinary standard cod liver oil fortified with irradiated ergosterol to five times the antirachitic potency of standard cod liver oil. It is to be kept in mind that irradiated ergosterol can not take the place of cod liver oil and is not meant as a substitute for it. Cod liver oil is rich in Vitamin A and owes much of its therapeutic value to this constituent. However, cod liver oil that is rich in Vitamin A may be deficient in Vitamin D, and thus not be sufficiently antirachitic for curative treatment. Therefore the addition of irradiated ergosterol and standardization insures a sufficient content of Vitamin D. This preparation is put up in 3-ounce and 16-ounce bottles. The dosage ranges from one-fourth to one teaspoonful three times a day as the specific case indicates.

These two products are manufactured and sold under license from the Wisconsin Alumni Research Foundation by five pharmaceutical houses in the United States, namely, Parke, Davis & Co., E. R. Squibb & Sons, Abbott Laboratories, Drug Inc., and Mead-Johnson & Co.

These products of irradiated ergosterol are standardized by bioassay methods, this being the only means available at present. The method is called the line test, the object being to produce a narrow and continu-

ous line of calcium deposits in the metaphyses of the distal ends of the radii and the ulnae of standard rachitic rats when fed under standard conditions.

The method may be outlined in the following manner. A robust and parasite-free breeding stock is maintained on a special diet. This diet consists chiefly of the following in correct proportions: Yellow maize, linseed oil meal, powdered milk, crude casein, alfalfa, iodized salt, and calcium carbonate. The young rats are weaned when they are 24 days old and must weigh not less than 40 grams. They are then placed in a darkened room and placed on a rickets-producing diet consisting chiefly of whole wheat meal, yellow maize, gluten, gelatin, calcium carbonate and salt in the correct proportions. The rats are kept under these conditions for 18 days. On the 18th day they are put in separate cages and given irradiated ergosterol in definite dosages. This is given for five days in conjunction with the rickets-producing diet taking care that the rat does not lose weight.

At the end of the 5th day the rats are killed and an autopsy performed. The longitudinally sectioned halves of the proximal end of the tibia are exposed in a two per cent solution of silver nitrate to strong light. In the calcified areas, silver phosphate is formed and reduced to black metallic silver. The test is based on the development of a line at the zone of provisional calcification, and the reappearance of bony trabeculae in the metaphysical osteoid which was abnormally developed during the feeding of the rachitic diet. From the above the potency of the irradiated ergosterol is calculated from the dosage found necessary to initiate calcification.

The discovery and development of irradiated ergosterol has brought a great advancement in the clinical treatment of rickets and related affections. Many definite proofs of its value in rickets and diseases due to calcium deficiency or defective calcium metabolism may be found in literature. Very marked results have been obtained in the treatment of tetany and osteomalacia. Irradiated ergosterol has been reported of great value in hastening the union and healing over of fractured bones. One experimenter recommends it as a wound dressing, but the effectiveness of this use is doubtful. Given to adults it has been found to produce marked calcification in the teeth and to pre-

vent the spread of caries. It is recommended to expectant and nursing mothers to insure against the reduction of calcium in their own bodies and to insure strong and well formed offspring.

There has been a great deal of discussion as to the use of vitamins in increasing resistance to infection. It has recently been proven that Vitamin A is responsible for this effect, and the idea that it is due to Vitamin D is erroneous. However, it may be that there is a certain extent of interrelated action between the vitamins. This phase of interrelationship of vitamins is now beginning to receive a great deal of attention.

There are a great many possibilities initiated with the discovery of irradiated ergosterol. First of all it may mean no more rickets, which will alone reward all the work given the product. It will be a great factor in the elimination of round shoulders, bowed legs, deformed crania and chests. It will mean well formed teeth and less dental caries. However, we have yet to educate the public to the importance of vitamins in the metabolism of the body, and it is not to be forgotten that correct diet and many other factors also enter into the prevention and cure of these affections.

Russell McArtor, '31.

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THE PHARMACY BOARD AND THE LAW

An editorial appears in the *Northern Ohio Druggist* for December, objecting to the action of the Pharmacy Board in sending out a warning to manufacturers and retailers in regard to the placing of poison labels upon poisons when selling them. This warning has especial reference to the sale of tablets and pills, such as laxative ones, which contain poisonous substances.

The writer has always believed in law enforcement. Recent years have pointed out that unnecessary and impractical laws as well as those fanatical in origin are never taken seriously and cannot be successfully enforced.

The public must be in sympathy with a law if it is to be successfully enforced and if its enforcement is to be of value.

That portion of the General Code of Ohio, known as the "Poison Laws," is covered by Sections 12663 to 12671-1 and pharmacists should occasionally read them over.

They were written for the protection of public health and for the great general purpose that a buyer shall know when he purchases a substance if it be a poison. Any attempt to sell a customer a substance containing a poison without his knowledge is certainly a violation of the moral code as well as of statute law and in addition is not good business.

Section 12669 and Section 12671 cover the point in question. The first section refers to the list of poisons mentioned in Section 12666 and states that it is not necessary to place a poison label upon a preparation containing any one of them "when a single box, bottle or other package of the bulk of one-half fluid ounce or the weight of one-half avoirdupois ounce does not contain more than an adult medicinal dose of such poisonous substance."

The second section refers to certain definite types of remedies including those for external use and also does not require poison labels and registration for "pills, tablets, or lozenges . . . intended for internal use, when the dose recommended does not contain more than one-fourth of an adult medicinal dose of such poisonous substance." This second section will cover all those poisons not covered by the first section mentioned.

The pharmacist has been charged with

the handling of poisonous medicinals. Will his carelessness and "What's the use" attitude be the cause of more stringent legislation? Will he never learn to accept responsibility?

What if this enforcement does kill the sale of some favorite now sold by everybody? There are surely enough non-poisonous laxatives to be had.

Leaving the moral issue out of this article, though by no means disregarding it, much may be written upon this subject. The writer has before him two deaths, one of a two year old boy from "pink tablets" and another of a three year old boy from "sugar-coated pills" taken from only two papers since this warning was sent out. How many more may be found and how many are unpublished?

In these days of keen competition is it not wise for the pharmacist to insist upon law enforcement and restricting to pharmacists the sale of dangerous medicinals? If they are safe in unlabeled packages and if anyone may sell them, then that is one more reason for not having pharmacists. Why not credit your customers with some intelligence and teach them how to handle such substances? Point out what the ingredients are. Why not have a poison register in a prominent place to help prove that the store is a drug store?

You are your brother's keeper; that is your job. When will you assume your duties and show the public that a pharmacist possesses some knowledge, realizes his responsibility as a keeper of public health and that he is endowed with common honesty?

E. S.

PROFESSOR ARMY SPEAKS

Friday evening, Nov. 8, Dr. H. V. Army, formerly the Dean of the School of Pharmacy here, and now the Dean of the School of Pharmacy at Columbia University, addressed the local branch of the American Pharmaceutical Association at a dinner meeting at the Hotel Statler.

Dr. Army's subject was "The American Institute of Prescriptionists." "In 1914, an outline for the A. I. P. was presented in a paper to the A. Ph. A. At that time, Dr. Bastedo of New York had reported a deplorable condition of pharmacy in the city of

New York. He did not know where to go to have prescriptions filled, and suggested that the American Medical Association create a class of certified pharmacists. The danger of this lay in the fact that the A. M. A. would try to control all pharmacists, so I suggested this American Institute of Prescriptionists to take the place of his idea."

The basis of this paper in 1914 had four principles for membership. First, the pharmacist must have had proper training in his profession. Second, he must have proper appliances and apparatus to demonstrate his skill. Third, he must prefer the prescription side of his calling. Fourth, his business must reflect this by showing a gross percentage of prescriptions, medicinals, etc., of per cent.

When Dr. Squibb applied for membership he was blackballed because he was not a pharmacist. One of the most active early members was actually expelled because he had been discovered to be unethical in certain labeling of manufacturers, but really the main basis was that he had left retail pharmacy for manufacturing.

We have been going through an evolution ever since I have been in Pharmacy. Pharmacy is always in an evil condition and always going to be better. This is true not only of retail druggists, but also of manufacturers and wholesalers. All the old manufacturing pharmacists started in the back rooms of drug stores. In those days they approached the retailers with the arguments that they could make better preparations, cheaper preparations, and that it was a waste of time for the druggists to do this. Also, their preparations were assayed. Next, when competition grew, physiological assay became a talking point. Just then the Pharmacopoeia began putting in assays, which took away a talking point. The manufacturers are pushing the Pharmacopoeia to the background and are handling specials. They are losing interest in the drugs which physicians should prescribe.

To go back to the A. I. P., who should constitute this Institute? It will not be made up of the outstanding, so-called ethical pharmacists. The well-established men do not want it; instead the younger men who are anxious to build up a prescription business rather than a general merchandising business. The American Institute of Surgeons was organized in 1914 for that

very purpose. The same idea is in the Rotary Club of America.

How shall this A. I. P. be organized? It will never come into being until an ambitious group of pharmacists get together and employ an ambitious young pharmacist to run it. They must raise at least twenty-five thousand dollars a year.

What shall be done with this money? Advertise. Point out to medical men that you belong to this organization, that there are stores in the community where prescriptions are safely compounded. Advertise the fact that there are a limited number of pharmacists enthusiastically interested in the profession of pharmacy.

Specific advertising could deal with the products sold. Manufacturers are gradually unloading U. S. P. and N. F. preparations. Medical men want U. S. P. preparations. There are those preparations which should not be made up in advance—infusions, decoctions, eye lotions, and ointments. There is a possibility of a line of A. I. P. prescription specialties, but this is dangerous ground.

How will physicians respond to the A. I. P.? Enthusiastically, we predict, provided it is run honestly by honest pharmacists, capable of compounding prescriptions properly.

Assuming now, that you are convinced of the advisability of forming such an organization, what should be done to protect it from the dangers that arise with success? First, inferior men will try to get in. Second, members will be lured away by chain organizations with large salaries. To prevent this, membership shall be limited to a three-year term, renewable only when a member's qualifications remain unchanged, and the member must be the owner of a prescription pharmacy.

SCIENCE PRESENTS NEW THEORY OF EVOLUTION

At the annual convention of the Association for the Advancement of Science in Des Moines recently, Dr. Charles B. Davenport, director of the Carnegie Station for Experimental Evolution, and president of the American Society of Zoologists, presented a new theory of evolution. According to Dr. Davenport, an explosive process akin to

the one by which radium gives forth its rays, may be at the basis of evolution.

It is known that the atoms of radium are continuously disintegrating so that the radium eventually turns into lead. The three types of rays given off by radium are by-products of the disintegration.

Biologists have proven that the nuclei of the living cells of all living organisms contain little rod-like structures known as chromosomes. These in turn consist of smaller entities known as genes. Dr. Davenport believes that a radium-like disintegration within the genes may account for evolution.

Evolution involves change, and if heredity were the only factor there would be no evolution. Biologists find changes in offspring which they call mutation. It is in the field of mutation that the greatest discoveries of the past quarter century have been made. It is the greatest contribution that the twentieth century has made to our knowledge of evolution.

"The experimental study of mutation has shown that the chromosomal mechanism, so carefully protected and evolved, and so well-fitted for its purpose of continuing the organic world, is subject to accidents, by its very complexity.

"Different types of radiation will induce mutations. It is even possible that cold, by reducing protoplasmic activity, may play a part. Single genes, rather than an entire chromosome, may change, these being known as point mutations. Or hybrids may arise with double sets of chromosomes. And so from this point of view, the cause of evolution is to be found in the nature of the constituents of the genes themselves."

Apparently the gene has an internal capacity for mutation just as an alarm clock has an internal mechanism for ringing a bell. When viewed from this light, Dr. Davenport said he felt that the surprising fact was not mutation but heredity. These facts are so clear as to lead us to rephrase the old problem of evolution and instead of stating it as the origin of the species, think of it as the problem of why any species remains long constant.

"To survive, a mutation must meet the conditions imposed upon it by an environment that is very puritanical and hard-boiled. Environment, acting as a censor, keeps the species homogenous and pure."

THE NATIONAL ASSOCIATION OF BOARDS OF PHARMACY

(The essential facts of the following are drawn, largely as excerpts, from a recent article entitled, "Reciprocity Explained," by Sec. H. C. Christensen of the N. A. B. P. and a synopsis of proceedings of the last N. A. B. P. convention.)

A generation ago a pharmacist who found it necessary to change his residence from one

WHY AND WHEN THE N. A. B. P. WAS ORGANIZED

state to another was confronted with a serious problem. After, perhaps, a long trip he would likely have to wait several months in order to take a Board examination. Frequently the outcome was failure for it is difficult for a pharmacist, as a usual thing, after ten or more years of retail practice to pass a Board examination. Much of his technical book knowledge has gone stale. It was while discussing this condition of affairs that a group of Board members attending a convention of the American Pharmaceutical Association in 1904 called a meeting and organized the National Association of Boards of Pharmacy. This was a voluntary banding together of the Boards of Pharmacy with the following purpose as stated in its constitution: "*To provide for inter-state reciprocity in pharmaceutical licensure, based upon a uniform minimum standard of pharmaceutical education and uniform legislation.*"

In commencing its work the N. A. B. P. was confronted by as many different pharmacy laws

BASIC RULE FOR RECIPROCITY

as there were states in the union plus the District of Columbia, with no two of them alike. The acts of each Board were, of course, restricted by its own State law, and, as a consequence, no state could "give in" by way of trying to harmonize and reach a common standing ground. The best "common denominator" that could be found, i. e., the most acceptable basic rule that could be formulated for the purposes of the Board was as follows: The applicant must have had the legal qualifications at the time of examination and registration in the state from which he applies which would at that time have enabled him to qualify for examination and registration in the state to which he is applying for reciprocal registration.

It should be noted that it is the applicant's qualifications at the time of examination and registration which are the basis for judging his eligibility for reciprocal registration in any particular state and not his present qualifications.

All registered pharmacists should always be sure to keep in good standing by payment of

KEEP IN GOOD STANDING

renewal fees in the state in which they were originally registered by examination, if required. (Some states have permanent registration.) Reciprocity is always on the basis of registration by examination. Registration obtained by reciprocity cannot be used to secure further reciprocity. A person who registers by examination in Illinois and then secures reciprocal registration in Indiana, dropping his Illinois registration, finds himself in a bad way later when he may wish to go to Ohio or some other state. Illinois will not certify to his registration and grades *unless he is in good standing*, and Indiana has *no grades* as he did not take an examination there. He might take an examination for reinstatement in Illinois, but if his reinstatement were dated on the later date, it would cancel his exemption from higher requirements enacted in the interim.

In order to reciprocate with another state a registered pharmacist should first write to the

FIRST STEP FOR THOSE WHO SEEK RECIPROCITY

secretary of the National Association of Boards of Pharmacy, 130 N. Wells St., Chicago, for a preliminary information blank. All the questions asked on the blank should be answered fully. The burden of proof is on the applicant; only the submitted credentials are considered and investigated. When the blank is completely filled out it is to be returned to the secretary of the N. A. B. P. accompanied by a twenty-five dollar check. This fee goes to the N. A. B. P. to take care of its current expenses. Insofar as considerable clerical work is involved in the handling of every applica-

tion, the applicant is not entitled to a full refund in case of rejection and no part of the fee will be returned unless good and sufficient reasons acceptable to the secretary be advanced, when a sum not to exceed twenty dollars may be refunded on return of the application to the secretary's office.

It must be remembered that no State Board is *obliged* to accept the credentials of an applicant, though the N.

FINAL STEP IN ORDER TO GET RECIPROCAL REGISTRATION

A. B. P. has *ap- proved* the application. The recipient Board is the last Court and has discretionary power to reject applicants for a cause. The N. A. B. P. has no record of grades and in some states these have an important bearing on acceptance or rejection. Most Boards require the applicant to appear before them, or *one* of the Board members, in order that the applicant's noticeable personal traits may be observed. However, if there is any hope of acceptance, the secretary of the N. A. B. P. will approve proper credentials, only withholding certification from those who are not deemed eligible in order to save them the cost of further efforts, in both time and money. After having received the officially approved application from the N. A. B. P., the applicant then forwards it to the secretary of the Board where he wishes to become reciprocally registered. The secretary of the recipient Board will forward to the applicant a letter of notification as regards further requirements by way of personal appearance before the Board, or a Board member, the forwarding of certified grades from the Board where the original examination was taken, and such other information as the recipient Board may desire. A fee for reciprocal registration will also be demanded by the recipient Board. This varies from ten to thirty dollars, according to state. Only one state, Ohio, charges fifty dollars. There is also a fee for certification of registration and grades, payable to the Board where the original examination was taken. This fee is usually one dollar.

If an applicant takes the regular examination in a state and fails, he is usually debarred from entering that state

FURTHER DETAILS IN REGARD TO RECIPROCITY

by the reciprocity route. For example, if a candidate fails the Ohio examination and then later passes the Indiana examination, Ohio will not receive him

as a registrant by reciprocity. After registering by examination in a state, one must remain and practice pharmacy in that state for one full year before he can seek reciprocity. This is a general rule among the reciprocating states, though, under extenuating circumstances, some states have the power to waive this requirement but that is the exception rather than the rule. With only two or three exceptions (Ohio is one) all the states require retail drug-store experience for registration, regardless of the time spent in a college of pharmacy. It is therefore important that every candidate for registration by examination make sure of enough prior experience before taking the Board. Experience obtained *after* registration has no value as prior experience. It is wiser for the college graduate to delay completing his registration until he has had sufficient experience to meet the maximum state experience requirement, thus insuring himself against disappointment in the future should he find it necessary to register in such a state by reciprocity. All the states of the union are now active members of the N. A. B. P. except New York and California. New York has been an associate member for years and has assisted in the work of the association but for technical reasons within the state, has been unable to become an active reciprocating member. In addition to the states, the District of Columbia, Alaska and Porto Rico are also active members of the association.

The N. A. B. P. is an information bureau where one may get all sorts of information in

OTHER FUNCTIONS OF THE N. A. B. P.

regard to the pharmacy laws and regulations of the various states.

Furthermore, the association is always lending its efforts toward the establishment of a more uniform standard of pharmaceutical education and legislation. It is quite obvious that such efforts will hasten the day when we shall have a true reciprocity of national scope. The Board has recently established a department of post-graduate study with a director at its head. The Board, as a rule, is composed of busy practical men who have little time for outside reading or to keep in touch with the progress being made in the profession. By having all sorts of information along scientific and technical lines presented to them in abstracted form through bulletins issued by the director, it is believed that the service will prove useful to members in their examination work. With representation on the joint survey committee

which has been made a permanent committee of the American Council of Education, under the title of "Committee on the Study of Pharmacy," the N. A. B. P. has not only won for itself a worthwhile recognition, but will exert an active influence in bringing about a comprehensive and authoritative survey of Pharmaceutical Education. Such a survey cannot be anything but a powerful influence for good in professional pharmacy. N. T. C.

ASSEMBLY NOTES

Wednesday, December twelfth, Mr. A. L. Flandermeyer, a member of the Ohio State Board of Pharmacy and former President of the Northern Ohio Druggist's Association, addressed the students of the School of Pharmacy.

Following a few brief statements contrasting the old Pharmacy School at City Hall with the present location and the methods of teaching, Mr. Flandermeyer reviewed the history and the duties of the Board of Pharmacy of this state. Until 1884, no such body existed, although in 1873 a pharmacy examining board had been created by the Legislature. This however, applied only to pharmacists in Cincinnati; and in 1875, the law was amended. In March, 1884, the Board was established; in 1907 the first secretary, not a member of the Board, was appointed. Since 1912 Mr. M. N. Ford has held that office. The Ohio State Pharmaceutical Association recommends persons for one annual vacancy and the Governor selects the member.

Four times yearly, in January, April, June and October, it is the duty of the Board to examine candidates for the pharmacist's license. Candidates are required to present themselves at Columbus at the appointed time when they are given written examinations in chemistry, pharmacy, toxicology, posology and pharmaceutical arithmetic. Their skill in pharmaceutical art is also tested by practical work in compounding and dispensing. Members of the Board grade all manuscripts, submit them to the secretary for recording and from his lists the Board selects those who are capable of assuming the responsibilities of a pharmacist.

As to the present conditions in pharmacy, Mr. Flandermeyer explained the interest shown by his organization to better the profession, and along with this he gave ideas

of the powerful opposition which the Board encounters in attempting to enforce its restrictions. He believes that a long time will elapse before the professional and the commercial types of pharmacy can be separated, but he thinks that this period can be shortened greatly if the schools will advertise what they are doing for their students, and the students, in turn, advertise what the schools are doing for them.

In conclusion, graduates of the Pharmacy School of Western Reserve were very highly commended for their splendid record made in the State Board examinations last year. All candidates were successful, Reserve's one-hundred per cent record aiding materially in preventing the percentage which passed from falling to an extremely low mark. Of the 353 applicants last year, 193 or 54%, were awarded their licenses.

On Wednesday, November 20, Dean Benton of the graduate school spoke to the student body. Briefly the Dean outlined for us the evolution of graduate schools and the growth and purpose, particularly, of our own Graduate School.

Only since the Civil War has the graduate school developed. As everything else worthwhile, it has its purposes: to train people for instructors in our Universities; to conduct and stimulate and above all to promote research. Until the advent of the graduate school, new discoveries were only incidental. Rarely was the work done by a University man.

What does the graduate school mean to the faculty and what does it mean to our student body? For the faculty it is to train people to fit themselves for life, and to always be prepared to enlarge the particular field in which they work. As for the student body, it is here to train leaders to teach pharmacy and to train men in industry.

The Graduate School of Western Reserve University was organized in June 1926. Beginning with a very limited enrollment, it has grown until now there are over six hundred students.

DEAN SPEAKS AT SOUTH HIGH

Wednesday, Jan. 15, Mr. Spease spoke to the students of South High School. In a word, the Dean explained the rudiments of pharmacy and advised as to the use and non-use of patent or more properly called proprietary medicines.

The Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University.*

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VOL. 4

WESTERN RESERVE SCHOOL OF PHARMACY

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January, 1930

EDITORIALS

COUNTER PRESCRIBING

There prevails in many of the drug stores of Cleveland an evil which casts an overwhelming shadow on the pharmaceutical profession. It benefits the practitioner materially in a financial way, but at what a cost to the profession at large of which he is a member. It is the matter of "counter-prescribing" which is proving itself a black mark on the good name of pharmacy.

So far has this practice been carried that some people never bother about their doctors any more when sickness occurs. They go to the corner drug store, their ailment is diagnosed and they get a box of pills thrown in for good measure—all this for about one-fourth of what it would cost had they gone to see their physician. True, the customer is satisfied, but on the other hand, is it fair to him and to the pharmacists who attempt to uphold the tenets of the profession?

Not only is this matter an injustice to true pharmacy, but it is a greater injustice to the medical profession. The pharmacist, it would seem, is over-stepping his bounds when he diagnoses cases which come to him. He knows he is not trained for this work, yet he stands ready to render service, the mastery of which is attained only by intensive study, keen observation and years of experience. What he may determine to be merely an intestinal cramp may prove to be appendicitis, and if a laxative be administered, according to the usual mode or treatment, the patient is in very serious danger of suffering a ruptured appendix, and the complications which follow such an oc-

currence. He may be fortunate now and then in alleviating the trouble, but the human body is too delicate an organism to toy with if one is not thoroughly familiar with the conditions surrounding the case.

The temptation to indulge in this practice is great, for it means added profits and, in addition, places the practitioner in high esteem. Some however, have let the mercenary side run away with them, and it is their sole purpose to see what parasites they can be on the layman's pocketbook. And oftentimes their fees total more than they would had the individual been attended by a physician in the first place. It is granted that all who indulge are not of this type, for there are many who wish to help the public as much as possible. It is a dangerous course to follow, nevertheless, for prescribing is the task of one who understands the condition and physical make-up of the patient. No matter how slight the ailment, it is the duty of the pharmacist to recommend medical treatment should anyone seek medical advice or treatment from him. Never should he act in the capacity of a doctor.

Complaints that physicians are not writing prescriptions can be traced to "counter-prescribing." If the druggist encroaches upon the field of the doctor, why should the doctor not carry his own stock of medicine which he himself can give his patients? What's fair to both though, is at the same time, detrimental to both. The druggist, while he has the medicines, cannot dispose of them so readily, and it is impossible for the doctor to maintain a sufficiently assorted stock to supply all of his needs. The bet-

terment of conditions then, remains partially with the offenders in pharmacy. If they cease the practice of "counter-prescribing" and hold more closely to their profession, it is almost a certainty that the physicians will reciprocate by ordering the wants of their patients from the pharmacists.

IN THE NAME OF RESEARCH

Every one knows that most of the modern progress in all lines of endeavor is the result of genuine, painstaking search for new significant truths concerning things worth while. However, we have often wondered at the tremendous amount of laborious, detailed work done along certain lines of so-called research in the pure and applied physical sciences—wondered if it really did have significance—wondered if its import might not be compared to finding out how many leaves are on a certain kind of deciduous tree or how many pebbles on a square yard of wave-washed beach.

Apparently, the same condition of affairs prevails outside the physical sciences, for we note from time to time instances analogous to a recent so-called profound research problem laboriously worked upon by the University of Iowa psychologists. This particular research problem should be of interest to any college student, for it concerns many of his vital methods of thought and conduct.

It seems that the researchers ponderously arrived at the conclusion that the able student is inclined toward radicalism in his early manhood. In the words of a New York Herald Tribune editor, which we proceed to quote, we find further evidence that some kinds of research find it hard to discover the forest because of the trees:

"The brightest students tend to be radical—as long as they are young. Card catalogs, filing clerks, questionnaires, and a lot of industrious theory have gone into the making of a discovery that old-fashioned laymen have been suspecting for a long time to be true. The old gentlemen and the middle-aged who sat upon the court that condemned Socrates to death for corrupting youth were alarmed because the young bloods of Athens, the brightest among them, had radical ideas about the gods, about virtue, about justice, about wisdom.

"The caveman must have viewed with alarm the radical tendencies current among

the brighter cave youths. There must have been Phi Beta Kappa boys among the anthropoid apes whose dissatisfaction with the parental ways caused the elders uneasiness. It required no corps of investigators to verify the obvious fact that in youth intelligence and skepticism go hand in hand. Likewise it requires no bureau of statistics to confirm the suspicion that the skepticism, for better or worse, the divine or sophomoric impatience with the world as it is, grows dimmer with advancing age.

"One is inclined to doubt the intellectual alertness of a youthful student who is the quiescent imbibor of the established order in morals, religion, art, government, human relations. Every bright-thinking person in the early twenties is likely to be Left Wing.

"One is inclined, likewise, to doubt the maturity of any middle-aged man whose whole point of view is 'agin' the established in whatever guise it offers itself. It is a comfort to have trained psychological observation confirm the experience of thousands of years.

"It really would be news if it were discovered that the bright sophomore was reactionary, or that at forty, in everything from philosophy to government, he saw red. Meanwhile it is always reassuring to have the scientist burst into print with the brilliant discovery that it is wet when it rains, and that two and two do not make five."

FINANCIAL OBLIGATIONS

Permit us to remind those students who are financially indebted to any organization that arrangements for settlement of such claims should be made immediately. Just a few days remain, and another semester will be brought to a close. If, in addition to all the other things which must be looked after at examination time, this matter is left till the last minute, difficulties are bound to arise.

It will be recalled that it is a rule of the School of Pharmacy that its students keep their financial records clear. Not only is it a rule, but it will be backed and enforced by the proper authority if the occasion demands.

You have been cautioned, no doubt, by fellow members of the groups of which you are a member; the Dean made quite an elaborate speech in this respect at a recent student assembly; and the PHARMACON gives

you a final warning. If credit is expected for work accomplished during the past semester, prompt attention to the matter of financial obligations is necessary; for if this credit is lacking, students are not permitted to proceed with the coming semester's work.

THE GRADUATE

When you graduate from college you have accomplished something. You have shown by your efforts, sometimes by self-denials and even privations, that you are worthy of sitting among the elect. You are given a diploma which is a writing to all the world that you are worthy. The institution conferring this degree upon you shows that it and its faculty approve of you. Do you, in turn, have any further duties to perform? You have. You should conduct yourself in accordance with such a code of ethics, written or unwritten, that your acts should not bring discredit or reproach upon those who have received a like distinction unto yours or upon the institution conferring this distinction. In homely words, you must be careful not to "foul your own nest," else you must expect your associates to scorn you forever. One who graduates assumes a responsibility and also receives a blessing. Your future conduct must always find you worthy.

LEARNING VERSUS EARNING

Learning has replaced earning as our ruling passion. Millions of adults have decided that they have not learned enough even though they may have graduated from school or college, and so are turning to many institutions for adult education. Art and music are thriving; the radio has become a universal means for not only entertainment but also for instruction. The sciences, particularly chemistry, are opening new and intriguing doors. Books are better and more widely read; censorship is less annoying. In a word, we are nearer than we have been for a decade to the observance of the intellectual bill of rights.

PHARMACY SCHOOL DANCE

Shortly after the opening of the new semester, the Pharmacy School will hold its annual dance. Arrangements for the affair are being worked out now by the student council. As this event is the only one of the year representative of the entire school, it is the duty of each student to attend.

Usually, members of the freshman class are scarce at such affairs, but we have never delved very deeply into the cause. Whether it is stage fright or a lack of female or male companions, as the case may be, we do not know. If the reason lies in the former, prolonged treatment is required; but, if it lies in the latter, we know of remedies which are pretty sure to take effect in the short time before the dance. If you are afflicted, then, with "no escortitis," get in touch immediately with some of your friends who can suggest the proper remedy. In spite of everything be present at the dance, for if you miss this good time in your first year, you are liable to go through school letting the same thing happen over and over just because you don't realize what you're missing.

To the upper-classmen, you get pretty tired of each other, no doubt, but remember that you can do things at dances which are not permitted in class-rooms.

To the alumni, this is the next best chance to the Alumni Banquet to renew old friendships. Come and get in on the affair! See some of the faces which you used to see daily, but which are only memories now. It will do you a world of good!

To the Faculty, there will be no old-time dances, but all of your students are aware that you are quite proficient at the new steps. And we are positive that you wouldn't want to disappoint a hundred or more students.

And now a parting word to everyone, the Pharmacy School dances of the past have been very successful, so let's all get together and do our utmost to put the coming one over just as well.

PHARMACY WEEK—AN OUTSTANDING SUCCESS

For out-doing all previous efforts, the pharmacists of America launched a publicity program for Pharmacy during the week of October 13-19, so astounding in its scope that it has been referred to as the "multi-million dollar Pharmacy Week program."

The Drug Map of the World, prepared by Dr. E. L. Newcomb, Secretary of the Committee on Education and Research of the National Wholesale Druggist's Association, and furnished to all retail druggists by wholesalers, proved to be the most popular of any Pharmacy Week material ever distributed. Scores of requests for Drug Maps

for permanent display were received from schools, colleges, and even libraries, all over the country.

Hundreds of thousands of inches of valuable newspaper space—mostly contributed by the press of the nation—constituted a priceless tribute to pharmacy.

Through the Spanish edition of the *Squibb Message*, the Pharmacy Week movement has been popularized with the Pharmacists of all Spanish-speaking countries.

It has been estimated that the message of Pharmacy was carried over the ether to more than fifty million people. Besides this, many hundreds of talks were delivered before the members of service clubs, and other audiences.

The National Executive Committee is already formulating plans for the sixth annual observance of Pharmacy Week—October 12-18, 1930.

TOBACCO—ITS USE FREQUENTLY INJURING SIGHT AND MEMORY

Dr. Mackenzie, in his "Ophthalmology," a work on the anatomy and diseases of the eye, expresses his opinion that tobacco is the frequent cause of amaurosis, diminution, or complete loss of sight, and says, "One of the best proofs of this being the case, is the great improvement in vision (sometimes complete restoration), which ensues on the use of that narcotic being abandoned."

Tobacco is a powerful narcotic and often affects the nerves disastrously. This position of Mackenzie, says one French writer, is confirmed by M. Michel, who classes the disease among the two forms of cerebral, or brain, amaurosis (loss or diminution of sight by the condition of the brain), which are but little known. One of these conditions is seen in heavy drinkers, and is symptomatic of delirium tremens; but the other, he thinks, is brought about by the use of tobacco; and he also believes there are but few persons who have habitually, for a long period, smoked more than five drachms daily, without their sight, and often their memory, being more or less enfeebled.

Then let those who already realize either these conditions, or think the prospect good for their occurrence, abandon the use of tobacco in any form, at once, and forever.

Fortunate are those who cannot tolerate this pernicious habit; but one can scarcely see an old man, or even young men, and many boys, even passing along the street,

without a cigar in their mouth, or gracefully held in their fingers. If its use continues to increase for the next century as it has heretofore, we shall, I greatly fear, be the next thing to a nation of imbeciles; with much larger per cent of idiots than we have presently. A fearful responsibility rests upon parents, and governments. Certainly no college student should be allowed to use tobacco in any form; but it is law, and vigilant watchfulness of officers appointed for this purpose, with the same care and watchfulness of parents also that will ever prevent it, and that not wholly; for it has a fascination which cannot be accounted for upon any other principle, only that of exhilaration, which is, in fact, the reason why it should never be used. It overstimulates the nerves, and thereby destroys, or very much injures them, shortening life, if no more serious catastrophe, as blindness, loss of memory, paralysis, etc., does not set in before.

DENICOTINIZED TOBACCO

It is only natural that after dealcoholized beer and decaffeinated coffee, that, sooner or later some one would place on the market a so-called denicotinized tobacco. It is the general belief of the public that nicotine is the only harmful substance in tobacco. Ammonia, pyridine derivatives and carbon monoxide are other compounds that the smoker consumes. It has been scientifically established, that the drier the smoking tobacco, whether used in the form of cigars, pipe or cigarettes, the greater is the destruction of the nicotine. Dr. W. E. Dixon of the Pharmacological Laboratory of Cambridge, has expressed the opinion that the water content of the tobacco may be a more harmful factor than the original nicotine content.

The introduction of denicotinized cigarettes, cigars and pipe tobacco has just begun to arouse the interest of the public. Bulletin 295 of the Connecticut Agricultural Experiment Station, New Haven, Conn., contains a report on alleged denicotinized tobacco. The report is concerned with the work done by Dr. E. M. Bailey, the chemist in charge.

The fact is brought out that to the average mind "denicotinized" means "practically free from nicotine." This suggests at once that these products are essentially misbranded. It was the findings of the Conn. chemists that these alleged denicotinized

products contain but little less nicotine than do the corresponding leaf type tobaccos. They also reported that it was quite easy to find among ordinary brands a tobacco that was but little higher in nicotine content. To serve as a means of comparison they analyzed a number of the popular brands of cigars, cigarettes and smoking tobaccos.

Having analyzed these popular brands, they analyzed a number of the processed or denicotinized brands. They found that ordinary tobacco has an average nicotine percentage of 1.77. Their analyses of the denicotinized brands showed that they contain an average nicotine percentage of 1.28. To make it short, the denicotinized brands showed on an average that only about 28 per cent of the nicotine had been removed.
—*From Hygiea.*

PHARMACY WEEK ABROAD

It should be of interest—of vital interest—to American Pharmacists to learn that Pharmacy Week has been so enthusiastically accepted and endorsed by the pharmacists in all English-speaking countries.

The Associated Pharmaceutical Societies of South Africa made plans for a very comprehensive observance of Pharmacy Week. The same enthusiasm was shown in Australia, New Zealand, and Tasmania.

Great Britain celebrated in an astounding fashion. Sponsored by the Retail Pharmacist's Union, the greatest effort was put forth in the campaign to make Great Britain "pharmacy conscious." How well the Union succeeded may be shown by stating that Pharmacy Week drew twenty priceless inches of spicy comment in *Punch*, other than which "there is no other."

To quote from the *Advertiser's Weekly*: "Members of the Retail Pharmacist's Union have been demanding some form of national publicity and it has been decided to hold a "Pharmacy Week" from October 12 to 19. The Retail Pharmacist's Union is an association of retail, qualified pharmaceutical chemists, and has a membership of something like 7,000."

"In observing Pharmacy Week, more stress will be laid upon the dignity and responsibilities of the pharmacists rather than on increased sales."

Next year, American pharmacists will join hands with brother pharmacists throughout the world in observing the sixth

annual Pharmacy Week, October 12-18, 1930.

A TRIP TO SANAA, THE CAPITAL OF YEMEN IN SOUTH WESTERN ARABIA

We are here in Sanaa, but how we got here is simply a matter of imagination; we are the guests of Sheikh Ali Yahya. He invites us to his home for the iftar, an evening meal. Soldiers lead us to the heart of the city, where before a four-story house we are told our destination has been reached. Is this the home of our friend, Sheikh Ali Yahya? What a magnificent building, constructed of alternate rows of basalt and granite blocks. We are led to a beautiful, comfortable room on the fourth floor of this mansion. How restful those low divans seem to us!

Barely are we seated when a servant comes in with glasses of lime juice to refresh us. Another servant follows with a large tray of saucers with three apricots on each. The third comes in with coffee. Is this all we're going to have? We are all smoking the rare Egyptian cigarettes when another servant enters with a tray holding a silver censer; we are to inhale the fumes of the burning wood as it is passed around. But do they call this the iftar?

Wait! What is this? Two servants announce that we are to wash our hands and we are seated on the floors on cushions, for the tables are very low. We see innumerable little plates and dishes which contain both solid and liquid. Everything is well seasoned with chilli which flames in every dish as well as in our mouths. In the center of the table we see a platter of unsiced rice and mutton and two big dishes of broth with white and yellow pieces of fat floating about. We are told this is a great delicacy.

But what is that greenish looking sauce? Upon tasting it we find that it is made of some green herb like spinach to which everyone contributes some rice, meat and chopped mint, with an extra dose of red pepper. They call this hulbah and like hulbah does it taste!

At this meal then we learn to eat rice, with our fingers, pull the flesh off the bones, then dip into the hulbah, next into the butter, then into the broth for a "hunk" of fat. The iftar is over at last and the censers are again lighted and we see Sheikh Ali take

from his pocket a small vial of silver. Attar of roses!

The hour of ghat has come. This is a small perennial tree or shrub, *Catha edulis*. It is planted in upper Yemen like the coffee tree. It is very important for home consumption and so knowing this we shall learn how to use it. After the windows and doors are tightly sealed to everyone is thrown a bundle of ghat. We untie it and unwrap the straw and strip the branches of their leaves which we then chew. We find them very bitter and unpleasant but the juice must all be absorbed before our "wad" is spat into the glass cuspidor, shaped like an hour glass.

Not being used to this drug, we do not enjoy it; there is something in ghat, however, which the Yemenites do enjoy. We understand the effects are stupefying. It is supposed to stimulate the mind; cause talkativeness, sleeplessness and indigestion. It is, however, soothing, cooling and reduces the heat of the body. "Asia" says: "It stimulates and soothes; it brings rest and revives energy; it acts as a laxative as well as an astringent; it has in it the properties of both coffee and morphine; it gives you a feeling of kief and a dumb melancholy."

But now we are curious to know how this drug came into use. Upon inquiry we find that a goatherd once observed one of his goats acting in a rather frisky manner, leaping about a certain shrub. After watching this procedure for several days, he found the goat asleep one day by this plant. Now the goatherd ate some of the leaves himself and experienced the same effects as he had seen portrayed in the animal. He told his friends.

Bundles of it were distributed among the poets, nobles and other influential of the country, until now we see every man, woman and child in Yemen habitually using it as we do tea or coffee.

While we are finding all about this toxic drug, the other guests and even the servants are chewing ghat and smoking their madaahs. It looks indeed like a hashish den, for our breath hangs low in an amber atmosphere of this smoke, fumes of the censers and Attar of Roses. We can hardly tolerate this but to the Yemenites these vapors are even more intoxicating than the leaves. How can we dismiss ourselves without offense to our kind host? Not long after midnight we make our excuses and how cool

and freshing is the night. Never again do we wish to experience such a night of dissipation. Are we ready to return home?

Bertha Grosser, '32.

THE CHAOS OF A FRESHMAN'S MIND

The freshman—troubled by an inferiority complex, hampered by pestering sophomores, dogged by never-ending assignments—finds that the whirlpool of college life has dragged him into a state of troubled uncertainty. He does not know whether he is going to college to please himself or his father. He cannot tell whether the football games or the final exams are the most discussed topics. He is not sure whether the dean or the football coach is the most important person on the campus. In short, his opinions are a mass of unsettled ideas.

During the first few weeks at college the freshman finds that his mind is just a jumble of conflicting ideas on college values. The flag rush, that biology lecture, the English theme, the frat smoker, the algebra problems, the football game—all chase wildly through his mind. The effort of trying to concentrate upon one subject at a time seems too much for an inexperienced college student.

At first the freshman's troubles seem as large as mountains to him, but after a few months he begins to become familiar with the college and its ways, and he becomes as carefree and reckless as he was before entering college. Although he knows there are many things he does not understand, he becomes indifferent and he does not care. So after a few months at college, the freshman's troubles no longer cause insomnia; he is even willing to let his worries "slide."

Abe Hirsch, '33.

ATHLETICS IN PHARMACY SCHOOL

Joe Eisenberg, one-hundred and thirty-five pound runner-up last year, and the only Pharmacy School student entered in the intramural boxing tournament, is doing his best to keep in trim for the fighting season. His manager, Myer Karner, supervises the pug's schedule. Included therein are two square meals a day with no sweets, one half-hour roadwork a day, shadow boxing in the gym and light workouts every week. Every day Joe goes through a special set of calisthenics which are tuning up his mus-

cles to a fine caliber. In addition he is developing accuracy by punch-bag and strength by wrestling.

Says Joe: "I hope to be in good shape by the fighting season so that I can bring the Pharmacy School a boxing championship."

Says manager Karner: "After a somewhat doubtful decision for my boy last year, and considering the fine shape we expect to have him in, I feel confident in predicting a division championship for Joe."

PHARMACY TEAM STARTS SEASON

The Green Tornadoes started the season with a bang by drubbing the School of Architecture on Tuesday, December tenth, by a score of 20-13. The game was not a fast nor a particularly well-played one but it showed possibilities for an improved offensive machine. Miskiewicz, Kaspar, Spicuzza, Celke, Lester, Lauria Valway, Schroeder Kalasinski, Karner, Kaufhold, Fitch and a few freshmen saw action. Spicuzza was the high point scorer with Karner a close second. The Pharmics were guilty of too much dribbling and Coaches Edwards and Stockhaus have worked to correct this.

The second game played was a close contest which we dropped to Adelbert a week later by a score of 22-20. In this contest the loss was due to the scoring of Axelrod who consistently got away from his man to cage ten points. Karner was the main cog in the offense, registering sixteen points all by his lonesome. Miskie and Spicuzza each accounted for two points. The dark spot was the need for a tall and fast center to get the jump, but alas, Adelbert had a man too good for our own centers. At the start of the second half the foes were leading 20-8. The line-up of the Pharmics was shaken up with Miskie and Valway at guard, Fitch at center and Karner was shifted to forward as Spicuzza's running mate. But in spite of this defeat Mr. Edwards and Mr. Stockhaus still hope for a good showing.

Jerome Ratner, one of our real he-men freshmen, has been awarded his University numerals for football this season just passed. Jerry has been playing tackle for the Frosh varsity. He hails from Glenville High where he played fullback for three years and was honored by being picked as an All-scholastic choice.

We hope Jerome continues his good work and we look forward to a Pharmacy School representative on the University squad.

WHO'S WHO IN THE SCHOOL OF PHARMACY?

Mr. Edwards of our department of Pharmacognosy, was born in May, 1897, at Lancaster, Wisconsin. He was raised in the town of his birth and received his schooling in Lancaster schools, having graduated from Lancaster High in 1916.

When he left High School he was obsessed with a desire to become a great athlete. He was a member of all the local teams and engaged in all sports. So desirous was he of furthering this ambition that he sung cans across the counter of his dad's grocery store for a year to be able to start college.

Mr. Edwards entered the University of Wisconsin in the fall of 1917. His dream of being a great athlete was shattered when he broke his leg while playing football on the freshman team.

While his leg was mending, the war broke out and as soon as he was well Mr. Edwards enlisted in the Navy on January 8, 1918 and there he served his country for nineteen months as a radio operator on the submarine U. S. 506.

After his honorable discharge from the Navy he returned to the University of Wisconsin in the fall of 1919. He had no athletic ambitions and settled down to hard work and study. He was an assistant in the department of pharmacognosy and at the Wisconsin Experimental Station. Graduating from college in 1923, he was a member of Theta Chi, Phi Beta Kappa and Phi Kappa Phi.

Upon leaving school he secured a position with E. R. Squibb as a pharmacognosist and chemist. He left at the end of one year to go to the Indianapolis College of Pharmacy where he had charge of the department of pharmacog. On January 1, 1925 he married Miss Hildegarde Alt, a school day sweetheart.

He came to W. R. U. in 1928 and has been in our department of pharmacognosy since then. He has done graduate work here and at the University of Wisconsin. Mr. Edwards is a member of the A. Ph. A. and also of the new Northern Ohio Branch of the A. Ph. A.

V. DeOreo, 32.

FRATERNITIES

PHI DELTA CHI

Alpha Alpha of Phi Delta Chi held its last social function of 1929 by giving a house party at the chapter house on Friday evening, December twentieth. About twenty-five couples were present and it was quite a gay evening for all. Maybe everyone was happy because they were looking forward to two week's vacation, together with the good time they were having at the party. We were honored by the presence of Brother Edward Davy, and Professor Chamberlin as chaperons; also Dean and Mrs. Spease and Mr. and Mrs. Edwards, all of whom we hope enjoyed the evening to the utmost. Punch was served during the evening. The committee in the charge of the affair was composed of Brother Kuchta, Brother Kutler and Brother Lautenschlager; much credit is also due Patronsky and Bruehler who so kindly assisted in the decorative work.

On Friday, December twentieth, the *Alfalfa* made its appearance and we are glad to welcome it for the first time this semester. Brother Bruehler, the editor, is responsible for the success of this publication for the past three semesters.

Semi-annual elections of officers was held on Monday, January seventh. Brother Henry W. Gallagher was elected president, Sedely, vice-president, K. Lautenschlager, secretary, and steward; A. Kuchta, house manager; Robert Kumpf, treasurer; and brothers Bruehler, Schroeder and Rauschkolb, chapter room officers. Brothers Miller, Bruehler and Kuchta still hold their positions as assistant treasurer, editor of *Alfalfa*, and *Communicator* correspondent respectively. To all of these officers we extend a helping hand and wish them much success in the handling of the affairs of the chapter for the approaching semester.

Earl T. Cook has been chosen Grand Council delegate to represent Alpha Alpha in Minneapolis on February 16-19. A more dependable and more deserving man could not be chosen to represent us at this council and we expect from him an interesting and complete report of the meetings.

Brother Rand Hollenback, editor of the *Communicator*, our national publication, visited

us on January seventh; we enjoyed having one of the grand officers as a guest and sincerely hope that he enjoyed his short visit with us.

Two new men have been added to our roll. These are Brothers Rauschkolb and Sedely, who trod the hot sands and entered into the mysteries of Phi Delta Chi on December 11-13. These men are both sophomores at the school. We expect from them great performances on behalf of the chapter.

During the past holiday season, Brothers Hart, Snyder and Stafford all of Xi chapter in Columbus honored us with a short visit. Brother Baldinger, instructor at Notre Dame University, was also a short time guest while he and his wife were visiting in the city.

The chapter house was not quite as cold and deserted over the holidays as it has been in previous Christmas seasons. Besides having considerable crepe paper and icicle decorations, the front room displayed a well decorated and well lighted Christmas tree. Brother Patronsky is largely responsible for this.

PHI DELTA CHI ALUMNI NOTES

Brother Schreiner is working for the Standard Drug Company at their Clifton Boulevard store.

Brother Bader is enrolled at the Cincinnati College of Pharmacy this year.

Brother Shane is working at Roth and Hug's main store in Canton, Ohio.

Brother Paul Steidl purchased a store in Akron, Ohio. So far he is doing well and we wish him much success.

Brothers Highland and Gilbert are now living on East Boulevard. Tom is still with Marshall's and Gilbert is working as a Carter lead salesman.

Brother English was recently married. He is manager of one of the Marshall Drug stores.

Brother Germ is doing nicely in his store at Lyndhurst Village.

Brother Ischie is still with the Coca Cola Company and probably always will be. You should see his new red Ford sedan.

Brother Millager has recently left the

Marshall Drug Company and has accepted a position with the Upjohn Company.

Brother Hosler is still seen a couple of times a week on the campus. He spends the greater part of his time as director of the laboratories of the Miller Drug Company.

Brother Wargell is now the "head man" in Cleveland for the H. K. Mulford products.

Brother Henry Kumpf is located in Akron as manager of one of the Gorrell Pharmacies. Rumor has it that he is about to step into the realms of matrimony, we thought he knew better but we guess not.

ALPHA ZETA OMEGA

Many a lad has gone to bat and returned home with a fair young spouse upon his arm. Those who celebrated in this fashion are Jack Franklin, Max Weinberg and Melvin Matyas. It goes without saying that we wish the boys loads of luck in this, their most recent enterprise.

Mr. Abe Amster, another properous store owner, is doing his best to further pharmacy.

The annual pledge dance of the Theta Chapter of Alpha Zeta Omega was held November 20, 1929, at the Westlake Hotel. In spite of a gigantic snow storm which kept away several guests, everybody was in good spirits. The favors were hammered gold atomizers engraved with the A. Z. O. insignia and as souvenirs were highly cherished. The pledges for this year are four in number: Milton Resnick, Saul Eisenberg, Samuel Lester and Max Lessowitz, all of whom spent a thoroughly enjoyable evening at the affair.

Mr. Joe Silby is at his old trade of manufacturing—All hail-La Mo.

Plans are under way for the national convention which is to be held this coming June in Cleveland.

KAPPA EPSILON NEWS

The members of Eta chapter of Kappa Epsilon were entertained at a party given at the home of Marie Hoefer on Wednesday evening, October thirtieth. Decorations and refreshments were suggestive of Halloween.

Installation of pledges took place Wednesday evening, November twentieth. Lucille Bickford presided at the ceremony and the girls taken in were; Cecilia Kran-

askas, Ethel Koloszvary, and Virginia Portner.

On December sixth, the pledges were entertained at an informal dance given in their honor at the Kappa Psi house. Dancing was from nine to one. The chaperons were; Mr. and Mrs. Spease and Dr. and Mrs. Hovorka. Decorations were red and white roses. Refreshments consisted of sandwiches, cakes, and punch and were pronounced very good if we must say so ourselves. They must have been for even the crumbs had disappeared the next morning. There was much hurrying and scurrying on the Friday afternoon preceding the dance in order to make the house look orderly. Berth Grosser and Marie Hoefer were busy polishing furniture, Lucille Bickford battled viciously with the broom, and Ruth Kotershall was responsible for visibility through the windows. They were rewarded for their efforts by the enjoyable time the guests had.

We hope the boys appreciate the fact that the girls are turning out for their basketball games. With all this interest they should be displaying startling results.

ALUMNAE NEWS

Emma Pejsa, studying at Ann Arbor, spent the Christmas holidays at home in Cleveland.

Mrs. Lyle Matheson (Ruth Pirson) whose home is in Akron, enjoyed the holiday season at the home of her parents in Lakewood.

Mildred Pirson is working at Carrier's Drug store in Lakewood.

Gertrude Horsch is staying at home for the present.

KAPPA PSI NEWS

The fall of 'twenty-nine has been an eventful one for Beta Beta chapter. On October the fourth, the annual pledge dance was held at the house. Among those who danced to Pete Nesi's music, were Dean Spease, Professor Davy, Doctor Bacon and their consorts. Brothers Porter, Neely, and Blakeway of last year's graduating class were also present.

Shortly after, the idea of buying a radio was conceived. The plan was carried through with enthusiasm and success. According to this plan, a portable typewriter was raffled off, to help the chapter in acquiring this expensive addition to the fraternity

house. The drawing for the typewriter was held on the evening of December the tenth, Mrs. Otto Rehbürg proving to be the lucky ticket-holder.

With the new Brunswick Panatrope now in possession of the chapter, another house dance was held on November the fifteenth. With the new radio proving that it could dispense good dance music, a very informal and happy evening was enjoyed. Mr. and Mrs. Chamberlin honored us with their chaperonage.

On December the sixth, the house and radio were gladly loaned to the girls of Kappa Epsilon Sorority for a house dance.

Brothers Schweikardt, Whittaker, McArtor, Phillips, Lager and pledges Webb and Kaufhold spent the holidays at their respective homes, returning to school with a new-found energy.

Brother Ralph Blakeway has transferred his labors from Speer's Pharmacy to the Tarr Drug Company at Euclid and East Seventy-first Street.

Brothers Koci and Komarek have jointly acquired a drug store; the Progress Drug, located on Broadway, just west of East Fifty-fifth Street, bids fair to be a success.

DOCTORS SLOW TO ADOPT THE NEW

The American Medical Association, through its publication, the A. M. A. Journal, scoffs at the idea of the isolation of the flu germ.

And they may be right. No doubt, they often find it necessary to suppress, by their disapproval, a nostrum which might otherwise be inflicted upon a credulous public. Nevertheless the history of the profession shows that the very last to admit the worth of any remedial innovation are the doctors themselves. Every scientific discovery has had to run the gauntlet of the lashes of the physician.

Every physician or chemist that has been of any benefit to humanity by a departure from established methods, has been called a rebel and a fool. Those who early became excited about "germs" were called mad by their contemporaries.

When William Harvey discovered the circulation of the blood, other doctors said he was crazy. When Robert Koch isolated the tubercle germ, he was scoffed at by his colleagues. When Louis Pasteur, after

years of research, announced that he could vaccinate for the cure of hydrophobia, he was almost run out of France. Many people died of diabetes unnecessarily after insulin was discovered by Dr. Banting, just because nothing had been said about it in the textbooks.

PHARMACEUTICAL FIRMS AND DATA OF ESTABLISHMENT

Below we give a list of the oldest pharmaceutical laboratories in the United States and the date of their establishment. Schieffelin & Co. as well as William S. Merrell Co. are over 100 years old.

Schieffelin & Co.	1794
William S. Merrell Co.	1828
Frederick Stearns & Co.	1855
E. R. Squibb & Sons	1858
Reed & Carnrick	1860
Sharp & Dohme	1860
Parke, Davis & Co.	1866
Eli Lilly & Co.	1876
Maltine Co.	1876
Fairchild Bros. & Foster	1878
Upjohn Co.	1884
Abbott Laboratories	1888
Hynson, Westcott & Dunning.	1889
H. K. Mulford Co.	1891
H. A. Metz Laboratories	1892
Bayer Co.	1895
G. W. Carnrick Co.	1899

An acid in an onion which kills a parasitic fungus when it attempts to prey upon it, thus playing the part of a vegetable antitoxin, has been isolated and chemically identified by three University of Wisconsin scientists, Dr. J. C. Walker, Dr. K. P. Link, and Dr. H. R. Angell. This discovery, believed to be the first of its kind ever made, was announced before the National Academy of Sciences.

The first clue was given by the fact that white onions were susceptible to the disease, while certain strains of colored onions were not. A search was made for some substance present in the colored onion, and absent in the white ones, that would stop the growth of the fungus. This was eventually found and upon analysis was shown to be an acid of the phenol series, known to chemists as protocatechuic acid. A purified solution of this acid was tried on the fungus; this also stopped its growth, thereby clinching the conclusion of the three experimenters.—*Science Service.*

DO YOU KNOW—

That there is a fountain of perfume in Grasse, France?

That Grasse has been the center of the world's perfume industry for over 200 years?

That though it has hardly 20,000 inhabitants, there are 60 perfume factories; 2,000 tons of orange blossoms are utilized each year?

That the longevity of Grasse is greater than that of any other French city?

That the town was a little republic in the twelfth century?

That the average daily population of the eleven New York penal institutions is given at 7,755?

That a single colony of red ants will destroy two million insects in the course of a year?

That a kilo (two pounds) of Parma violet perfume essence is worth \$3,400?

That New York City contains more Italians than Rome, more Irish than Dublin, more Germans than Bremen, and ten per cent of the Jews of the world live there?

That the head of a perfume laboratory is called le nez (the nose)?

That Chefoo, China, with a population of more than 100,000, recently established its first regular moving picture theatre?

That the United States is the greatest purchaser of diamonds in the world?

That perfume was introduced by King Menos of the first Egyptian dynasty?

That thunder does not sour milk, but the same condition of the atmosphere which causes thunder does sour milk?

That the elephant reaches maturity at the age of 40?

That Michael Faraday started on his scientific career when he was a bookbinder's apprentice and happened to see some books on scientific subjects?

That an act of the English Parliament in 1770 forbade women to attract males by means of perfume?

That true Panama hats are made of the leaves of the screw pine?

That the world's coconut crop amounts to 8,000,000,000 coconuts yearly?

That the United States produces more than 1,000,000,000 pairs of stockings a year?

That eleven species of America's native birds have become extinct since the coming of the white man?

That Asiatic lions are extremely rare?

That Yuma, known as the sunshine capital of the United States, had some sunshine every day in 1928?

That the Roman legions burned coal in their army camp fires in Britain 2,000 years ago?

The U. S. Government has issued a warning to workers handling "dry ice," because of the number of claims which have been filed with the Ohio Industrial Commission for injuries received while using the product, which is frozen carbon dioxide.

The "dry ice" has been used extensively for commercial products, especially in ice cream and dairy plants. Its temperature is about 110 degrees below zero or 140 degrees below the temperature of ordinary ice. The result of handling it with bare hands is usually numbness and pain, not only in the fingers but also in the hands and arms. In some cases a form of neuritis is produced.

HOW TO MAKE A FRESHMAN UNDERSTAND SOMETHING

1. Tell him you're going to tell him something.
2. Tell him.
3. Tell him you've told him.
4. Summarize what you've said.
5. Repeat you're going to tell him something.
6. Repeat that you have told him.
7. Call a consultation.
8. Cross-examine him.
9. Tell him again.
10. Give him a blueprint.
11. Wire him.
12. Telephone him.
13. Pantomime it.
14. Let him go ignorant.

Phi Delta Chi Communicator.

Young Lady: "Druggist, can you fix up a dose of castor oil so that it will not taste?"

Druggist: "Certainly. If you will wait a few minutes, I will fix you up. Will you have a drink of soda while you are waiting?"

Young Lady: "Thank you, yes."

Druggist appears a few minutes later from behind the partition. "Is that all you require?"

Young Lady: "Yes, thank you. Is it ready?"

Druggist: "You've just drank it."

Young Lady: "Goodness gracious, that was for mother!"—*The Red Exchange*.

YARN

The bride was anxious not to forget to order two chickens for dinner, so she repeated to herself while clearing away the breakfast dishes: "Grocer—chickens, grocer—chickens." The words became confused in her mind, so she went to the phone and asked:

"Have you any nice grocers?"

"Why-why-yes," replied the grocer, quite astonished.

"Well," said the bride, "send me two, dressed."

"Dressed?" said the voice, more astonished than before.

"Why, no," answered the young wife, reflectively, "I believe that you can send them undressed. If my husband comes home early, he will wring their necks and the cook will dress them."—*Exchange*.

Sabo: "Let's make whoopee."

Trebec: "Too much trouble; let's buy it."

Dean (in class): "Be ready to answer quickly, I'm going to jump around the room."

Fitch: "Whittaker, who is America's greatest general?"

Whitty: "General Motors."

Obester: "I see where the doctors in Paris are vaccinating girls on the arms again, rather than the legs."

Lauria: "No doubt vaccinations were becoming too noticeable."

Bickie: "College boy?"

Ott: "No, couldn't get in where I wanted to."

Bickie: "What did you try for?"

Ott: "Vassar."

Silence is golden when it gives consent.—*Tennessee Mug Wamp*.

Our idea of a man truly going down in defeat is one with fallen arches.—*Cajoler*.

Judge: "What evidence have you that Mike was intoxicated when he came home?"

Mrs. M—: "He brought in a manhole cover, he placed it on the phonograph and wanted to play it."

Judge: "30 days in the House of Corrections."

THE GREAT LOVER

"Here's a pretty one," said the clerk at the stationery counter holding up a card which read, "To the only girl I ever loved."

"Fine!" exclaimed Webb. "I'll take six of those."

RULES FOR FRESHMEN

1. If you're fond of athletics and like good jumping, lift the mattress and see the bed spring.

2. If the room gets too warm, open the windows and watch the fire escape.

3. Seniors find that if one wishes to get up without being called, one can have self-rising flour for supper.

Swink: "What is the meaning of 'synonym'?"

Morse: "A synonym is a word that you use if you can't spell the other."

A DILEMMA

A small girl of Meade asked her mother: "If I grow up and get married will I have a husband like papa?"

"Yes, dear," the mother replied.

"And if I do not get married will I be an old maid like auntie?"

"Yes, dear."

The little girl thought for a minute and then remarked: "Well, I'm in a fix!"

FAT AND LEAN

A very fat man got into a bus. He almost smothered a sour-faced little man when he sat down. The sour-faced man glared at him and growled, "They ought to charge by weight in these busses."

"In that case," bellowed the fat man, "it would not be worth while stopping to pick you up!"—*Exchange*.

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

The Pharmacognosy Department

By Leroy D. Edwards

It has been suggested by the editor of the PHARMACON that a brief review of the various Departments of the School of Pharmacy of Western Reserve University might be of interest to our readers of other Colleges and Universities. Every school has its own ideas as to how any certain department should be conducted, and an exchange of such ideas should not only be interesting but helpful as well.

The curriculum of the Department of Pharmacognosy consists of the following courses:

11-12. General Botany. (Biology 11-12) An introductory course preliminary to all advanced work. Two lectures or recitations and one laboratory period of three hours throughout the year. No prerequisite. Three credit hours each semester.

107. Materia Medica and Posology. Pharmacological action, uses, posology, and toxicology of medicinal substances. Three lectures or recitation periods a week. Prerequisite: Course 115, 116, and Physiology 101 and 102. Three credit hours.

108. Biologic Assay Methods. Standardization of official drugs by the use of biologic methods. Three lectures or recitation periods a week. Prerequisite: Course 107. Three credit hours.

115-116. Pharmacognosy. The main facts of the natural history of vegetable and animal drugs, especially those official in the United States Pharmacopoeia and the National Formulary. Three laboratory or recitation periods of two hours each. Prerequisite: Course 11-12. Three credit hours each semester.

120. Microscopy of Drugs. The microscopic structure and characteristics of types of drugs, methods of identifying powdered drugs and food products, and of detecting adulterations. One lecture and two laboratory periods of three hours each a week. Prerequisite: Course 115, 116. Three credit hours.

121-122. Cultivation of Medicinal Plants. A study of medicinal plants that are being cultivated, methods of cultivation, harvesting, curing, and preparation for market. Field work with plants that can be successfully grown in the pharmaceutical garden. Lectures, and laboratory or field work to be arranged according to credit which may vary from three to six hours.

Biology courses 24, 27, 30, and 33 may be selected as electives for a major.

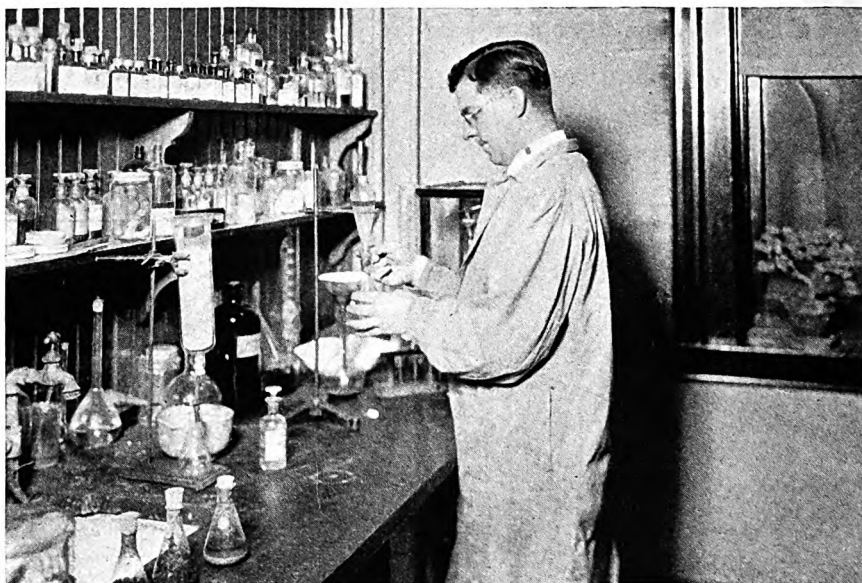
For graduate instruction see Graduate School bulletin—Biology 131, 132, 133, 136, 137, 138.

General Botany as presented at this School confines itself very largely to a study of the fundamental botanical principles. This is in accordance with our belief that Pharmacy students, as well as students of any other profession, should be given in their first courses a sound, working, educational basis which may be elaborated as they proceed in their special-

ized study. Too often this basic rule has been and is violated—too often the specialized student has been and will be graduated—not with an education—but with an armful of rules and a larger armful of exceptions. Pharmacy has been guilty of murder on this score, but the present trend to a four year college course and to better trained teachers seems to herald a re-awakening.

Our textbook, in this course, is *General Botany* by Smith, Overton, Gilbert, Denniston, Bryan, Allen—the so-called "Wisconsin Text." The first eleven chapters deal with (1) the Make-up of a Plant, (2) The Structure and Function of a Cell, (3) Roots, (4) Stems, (5) Buds, (6) Leaves, (7) Relation of Plants to Water, (8) The manufacture of Foods, (9) The Utilization of Foods, (10) Stimulus and Response, (11) The Division of Cells. The balance of the book follows a phylogenetic discussion of the plant kingdom with special chapters on Seeds and Fruits, Inheritance and Variation, Evolution, the Geographic Distribution of Plants in North America, and The Economic Significance of Plants. In the laboratory we use the *Manual of Fisk and Addams* which has been prepared to accompany the above text. Most of the material employed in the laboratory is produced in our Greenhouse. At least four field trips are included in our laboratory routine and in this work we enjoy the use of the Squire Botanical Gardens, several private estates, and the natural parks of Cleveland. With this outline of work it is hoped the student will learn to appreciate nature and to think botanically.

General Botany is followed in the second year by Pharmacognosy 115 and 116. Six hours per week are allotted to this course—three being spent in lecture and three in the laboratory. In discussing the U. S. P. and N. F. drugs we follow the Botanical Classification, and require the student to fill out the following outline for each drug:



Pharmacognosy Research Laboratory

Many of our most important medicines have been isolated from drug plants which form an intensely interesting field of study. Ideas originate here that sometimes lead to the synthetic production in the laboratory of some of these useful agents.

- | | |
|---------------------------|--------------------------|
| 1. Official Latin Title | 12. Description |
| 2. Official English Title | (a) Shape |
| 3. Abbreviation | (b) Size |
| 4. Synonym | (c) Fracture |
| 5. Botanical or Animal | (d) Color |
| Name and Family | (e) Odor |
| 6. Part Used | (f) Taste |
| 7. Habitat | 13. Constituents |
| 8. Impurity | 14. Medicinal Properties |
| 9. Ash | 15. Dose |
| 10. Assay | 16. Preparations |
| 11. Preservation | |

This method is employed because we feel there is no one Pharmacognosy text that is entirely satisfactory; that writing is an excellent means of learning; and that the student will upon completion of the work have a notebook that will be of considerable value to him. While no special textbook is required, we recommend the following as reference books: Youngken's Pharmacognosy, Kraemer's Scientific and Applied Pharmacognosy revised by Newcomb, Darbaker, Fischer and Gathercoal, and Materia Medica and Pharmacology by Culbreth. Our laboratory work includes studies of the gross structure, internal structure, and powdered form of the various drugs. Special attention is given in this course to the definition and application of the multitude of terms used in the description of crude and powdered drugs.

If the student can learn to read the U. S. P. or N. F. monograph of a drug with understanding, this work is more than justified. Work in identification of drugs is carried on by means of a cabinet which contains an unlabelled sample of each drug considered. The samples are however, numbered, and a key sheet is available to the student for study. From time to time we give a written or oral quiz over an assigned number of drugs, and at the close of the semester the student is required to identify all drugs.

Pharmacognosy 115 and 116 are supplemented by Microscopy of Drugs. In this course more detailed studies of the plant cell, non-protoplasmic cell contents, and plant tissues are carried out. The laboratory work is confined largely to powdered drugs and their adulterants, but some attention is given to commercial fibers, starches, and food products. This course, for the present, is elective, but the writer feels that it should be required of the four year student.

In a large city the Study of Cultivation of Medicinal Plants is more or less difficult, but



Greenhouse

Digitalis, Belladonna and other drug plants are raised in special soils under known conditions in the greenhouse and analyzed before quantity production of them takes place in the medicinal plant garden.

this Department has been granted the privilege of establishing a Medicinal Garden on the Squire Estate. The number of species of plants cultivated in the garden is constantly being increased, and certain drugs used by the Manufacturing Department are produced in quantity. The garden offers the student an opportunity to produce authentic material for research. He has access to drug plants in various stages of maturity and a crude drug prepared in such a manner as to avoid contamination, and changes brought about by improper curing.

Pharmacognosy 107 (Materia Medica and Posology) and Pharmacognosy 108 (Biologic Assay Methods) run concurrently, and are given in the third year. These courses include a discussion of the various drugs from a standpoint of action and uses. This is deemed necessary to enable the Pharmacist to understand the Physician's prescription. Throughout the courses, stress is given the subject of chemical structure in relation to drug action. The study of the biologic assay methods of the U. S. P. consists of lectures and demonstrations. A

term paper on some selected topic is required of all students.

A student desiring to major in pharmacognosy and to follow with graduate work has the opportunity to select work from the following University courses:

31. Advanced Botany. A course dealing with the development of plants, with special reference to non-flowering forms. One hour lecture and two laboratory exercises weekly. Prerequisite, one year of Botany.

71, 72. Plant Histology. The structure of plant cells, tissues and organs, with training in the methods of preparing these materials for microscopic observations. Three laboratory exercises to be arranged, with assigned readings and reports. Throughout the year. Enrollment limited. Prerequisites: courses 11 and 12.

32. Taxonomy. Identifications and classification of seed plants. Field work an important feature. Prerequisites: courses 11 and 12. Three laboratory periods of two hours each.

73, 74. Botanical Problems. Special work may be arranged according to the qualifications of the student. May be taken for 3 or 6 hours credit. Limited to Seniors.

33. General Bacteriology. The morphology, physiology and cultivation of bacteria and related organisms. Prerequisites: Botany 11-12 or Biology 1; some knowledge of chemistry. Enrollment limited. Two lectures and one laboratory period weekly.

34. Plant Physiology. An experimental study of plants as living, responsive structures. One lecture and two laboratory exercises of two hours each. Enrollment limited. Prerequisites: courses 11 and 12.

GRADUATE SCHOOL

131, 132. Botany. Courses in Botany designed to introduce the students to research. Weekly conferences with sufficient time for the problem in hand. Conferences and laboratory assignments at the convenience of instructor and student. Three hours credit each half-year.

133. Problems in the Taxonomy of Plants. A critical study of a plant family of genus. Field excursions. Prerequisite course 30 (Taxonomy). Two lectures, Monday and Friday, 9 to 10 a. m. and two laboratory periods of three hours each by arrangement. Four hours credit. First half-year.

136. Advanced Plant Physiology. Special physiological processes, enzymic activities and metabolic products. Prerequisite, course 24 and a knowledge of physics and chemistry. Two lectures, Monday and Friday, 9 to 10 a. m. and two laboratory periods of three hours each by arrangement. Four hours credit. Second half-year.

137, 138. Special Problems in Pharmacognosy. An advanced study of medicinal plants, preparation of materials and biological standardization. Two lectures and two laboratory periods of three hours each. Four hours credit each half-year. Time to be arranged.

Research problems now under investigation by the staff and graduate students are:

1. The Comparative Histology of Several Species of the Genus *Mentha*.
2. Phytochemical Studies of *Cimicifuga racemosa*.
3. Survey of Medicinal Plants of Northern Ohio.
4. Cultivation of *Carthamus tinctorius*—in Conjunction with the U. S. Department of Agriculture.
5. Enzyme Activity of *Digitalis*.

The personnel of this Department is well presented by means of reprints of their respective monographs found in the School catalogue.

FRANKLIN J. BACON, PH.D., 3550 Avalon Road
Professor of Pharmacognosy.

Ph.G., University of Wisconsin, 1918; B.S., 1920; Pharmacognosist, Eli Lilly and Co., 1920-22; Fellow, University of Wisconsin, 1922-23; M.S., 1923; Hollister Fellow, 1922-25; Ph.D., 1925; Professor of Pharmacognosy and Pharmacology and Head of the Department, University of Florida, 1925-27; Professor of Pharmacognosy, Western Reserve University, 1927—

Instructor in Pharmacognosy.

LEROY D. EDWARDS, PH.G., B.S., 1792 East 100th Street
Ph.G., University of Wisconsin, 1921; B.S., 1923; Instructor in Pharmacognosy, Indianapolis College of Pharmacy, 1924-28; Demonstrator in Pharmacognosy, Western Reserve University, 1928—

A.P.H.A. OFFICERS ELECTED

The Board of Canvassers of the A.Ph.A. has announced the election of the following officers of the association:

President: H. C. Christensen, Chicago, Illinois.
First Vice-president: Walter D. Adams, Forney, Texas.

Second Vice-president: D. B. R. Johnson, Norman, Oklahoma.

Council Members: H. V. Arny, New York City.
T. J. Bradley, Boston, Mass.
W. B. Day, Chicago, Illinois.

These officers will be installed at the annual meeting of the Association in Baltimore, May 5-10, 1930.

The 1932 meeting will be a joint meeting in Toronto, with the Canadian Pharmaceutical Association.

DEAN SPEASE—THE AUTHOR

A new book has made its appearance in our school recently and seems to be everywhere present. Dean Spease of our School of Pharmacy is the author of "Pharmaceutical Mathematics," published by McGraw-Hill. The Pharmacon is happy to congratulate the Dean on this new book and we feel sure that our freshmen will all be "math sharks" from now on.

LOCAL BRANCH OF THE A.P.H.A. MEETS

The March meeting of the Council of the Northern Ohio Branch of the American Pharmaceutical Association was held at Hayden Hall, March 13, 1930. Dr. K. K. Chen, Director of Pharmacologic Research, Eli Lilly and Company, was a guest at the dinner and speaker for the general meeting.

Dr. Chen gave an illustrated talk on the production of Ma Huang, and the chemistry and pharmacology of the active principles. The following are the main points discussed in his lecture.

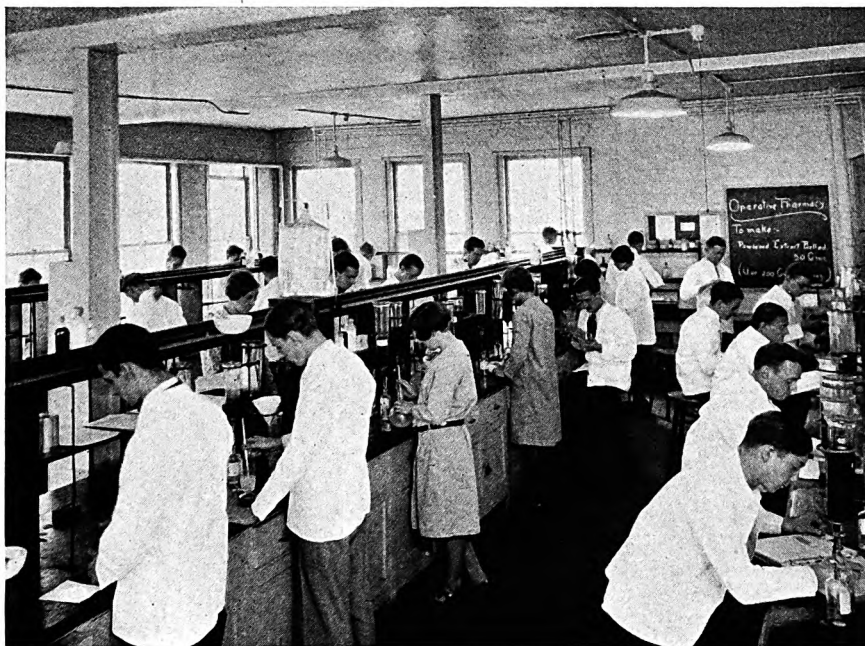
Ma Huang was *Ephedra Vulgaris* var. *helvetica* but has now been given a new name, *E. Sinica*. In commerce there is another Chinese species *E. equisetina*, which is also sold under the name of Ma Huang. These species present pharmacognostic characteristics that can be used for identification.

The active principle, Ephedrine, can be easily identified by its physical constants and some chemical tests. There are five other alkaloids that occur in small amounts in Ma Huang.

Dr. Chen has determined a racial difference in the mydriatic action of Ephedrine, powerful in Caucasians, but very weak in colored races.

Of six optical isomers, natural or 1-Ephedrine is most active physiologically. None of the synthetic compounds have proven to be superior to Ephedrine.

Clinically Ephedrine has been successfully used in spinal anesthesia in combating the fall of blood pressure. In conclusion Dr. Chen stated that most of the advances in the clinical uses of Ephedrine have been made during the last six years, and gave a survey of the work done on Ephedra and Ephedrine. He also demonstrated a chemical test to distinguish Pseudo Ephedrine from Ephedrine.



Above and on the following page are shown typical scenes in our pharmacy laboratories. It is here, along with those of botany, pharmacognosy and chemistry, that the students are thoroughly grounded in both theory and practice.

There is a technique in the production of medicines which a student must learn in the laboratory before he can become a safe practitioner or before he can become a pharmaceutical chemist. This cannot be acquired from books but must be learned from actual practice.

The part that poison has played in history is considerable, and the pharmaceutical knowledge of the ancients is graphically displayed in the deaths of Socrates, Demosthenes, Hannibal, and Cleopatra. In the early part of the Christian Era professional poisoners arose, and for a long time practiced their trade without punishment. Poisoning was used so much as a political engine of destruction that men of politics were ever watchful and wary for their lives.

It was at this time that the infamous Locusta flourished. She is said to have supplied Agrippina with the poison with which she killed Claudius. She was also the principal agent in the administration of the poison to Britannicus by his brother, Nero. The details have been recorded with some minuteness:

"It was the custom of the Romans to drink hot water, a draught nauseous enough to us, but, from fashion or habit, considered by them a luxury; and as no two men's tastes are alike, great skill was shown by the slaves in bringing the water to exactly that degree of heat which their respective masters found agreeable.

"The children of the Imperial house, with others of the great Roman families, sat at the banquets at a smaller side table, while their parents reclined at the larger. A slave brings water to Britannicus; it is too hot; Britannicus refuses it. The slave adds cold water; and it is this cold water that is supposed to have been poisoned; in any case, Britannicus had no sooner drunk of it than he lost voice and respiration. Agrippina, his mother, was struck with terror, as well as Octavia, his sister. Nero, the author of the crime, looks coldly on, saying that such fits often happened to him in infancy without evil result; and after a few moments' silence, the banquet goes on as before. If this were not sudden death from heart or brain disease, the poison must have been either a cyanide or prussic acid."

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solutions of arsenous acid of varying strength which were sold in vials under the name of "Asquetti de Napoli." She is supposed to have poisoned more than 600 persons, two of whom were popes. She was brought to justice in 1790, but she escaped punishment by taking refuge in a convent where she continued to sell her wares for twenty years. Under Toffana a group of young married women were organized for the purpose of removing their husbands when the occasion demanded.

Another artist of poisoning of this century was Mme. de Brinvilliers. She was as cold-blooded as Toffana, experimenting with her poisons on the patients at the Hôtel Dieu. She poisoned her entire family and very many others. However, a horrible fate overtook her. Some of her practices having become known, she was obliged to take refuge in a convent. Here she was courted by a police officer disguised as an abbé, lured out of the convent, and, in this way, brought to justice. She was beheaded and burned near Notre Dame in the middle of the reign of Louis XIV.

The necessity of detection of poisons to prevent the growth of such criminal schools as existed in the earlier centuries has led to the development of a highly specialized toxicological science embracing many branches of knowledge. People of today may be thankful for the fact that such iniquitous persons as Toffana and Mme. de Brinvilliers may not follow their calling without detection. This is undoubtedly due to the fact that the interest of so many people for this fascinating science, toxicology, led to its present development.

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POISONS

By Roger K. Lager, '32

A poison may be defined as any substance that causes, by its own inherent nature, impairment or destruction of function. The study of poisons is fascinating because of the many mysteries and intrigues connected with them in times past.

Tox, the root of the modern word toxicology, can be traced to a very ancient word meaning "bow" or "arrow," or in a broad sense, a "tool" which is used for slaying. Thus, the theory that the first poison knowledge was that of septic poisons is shown not to be a far-fetched supposition. The savage perhaps noticed that arrows stained with the blood of former victims made wounds fatal, due to putrefaction. Experimenting with all sorts of vegetable pastes and juices, he noted their mysterious effects. Since he attributed them to the supernatural, his poison knowledge was shrouded with superstition and mystery.

The history of poison-lore begins in the region of the myths, the land of the sorcerers in the far north. Of these, Hecate was the discoverer of poisonous herbs, and she was learned in remedies both evil and good. Her knowledge of poisons passed to her daughter, Medea, who stupefied the dragon, guardian of the golden fleece, and led Jason on to greater undertakings.

The oldest Egyptian king, Menes, and the last king of Pergamus, Attalus Phylometer, were both famous for their knowledge of plants. The latter knew many of our present drugs and experimented on the preparation of poisons and the compounding of medicines. Another Egyptian, famous for his chemical and pharmaceutical knowledge, was Mithradates Eupator. He is said to have prepared the famous "theriac" composed of fifty-four different ingredients. The fact that evidences of early Egyptian embalming and technical accomplishments still remain verifies the assumption that their chemical knowledge was considerable. Records show that they knew of prussic acid, obtained from the distillation of the peach kernel. Those who consider the art of distillation a rather modern discovery are inclined to doubt this. However, there is a probability that the Egyptians did know of and practice this art.

The knowledge of this deadly potion passed to the Romans and Greeks. The use of poi-

sons by the Greeks as a means of capital punishment was formally sanctioned. To commit suicide was more or less of a noble deed, and, in some cities, the authorities kept a poison, a dose of which was given to anyone who could show sufficient reason why he should desire death. However much the Greeks and Romans used or abused poisons, their methods of detection and knowledge of effects were incomplete.

Nicander of Colophon prepared two treatises, the first ever written on this extensive subject. In one of these, there are detailed descriptions of the action of certain poisonous drugs. The other describes the effects of snake venom.

Dioscorides, another early author on this subject, divides his works into three classes: animal poisons, plant poisons, and mineral poisons. Under animal poisons were classed cantharides, beetles, toads, salamanders, poisonous snakes, blood of the ox (probably in a putrid state), and the "sea-hare." As the poisons from plants there are: opium, black and white hyoscyamus, mandragora, conium, elaterin, aconite, colchicum, veratrum, etc. The poisonous properties of certain fungi were known and were called "evil fermentations of the earth." Under mineral poisons were listed arsenic, mercury, copper and lead. There were also other authors on this subject whose works are no longer extant.

Poisons in Asia, especially India, were for the purpose of suicide, revenge or robbery. There is an ancient practice of the Hindoo widow of self-immolation on the burning pile of her husband, which was undoubtedly originated to stop the crime of domestic poisoning. Another old practice of cattle poisoning in India necessitated a law by which the natives were obliged to bring their masters the valuable parts of the dead cattle. The poisons known to the Asiatics were arsenic, aconite, opium and various solanaceous plants. Another poison, supposedly capable of causing death a long time after its administration, is also said to have been known to the Asiatics. This is treated as a legendary myth by most of the modern authorities on Toxicology. However, there is a possibility that this may have been founded on absolute fact, the poison being the germ of some malignant, infectious disease. The Hebrews were acquainted with ergot, aconite, and some forms of poisonous parasitic plants.

The part that poison has played in history is considerable, and the pharmaceutical knowledge of the ancients is graphically displayed in the deaths of Socrates, Demosthenes, Hannibal, and Cleopatra. In the early part of the Christian Era professional poisoners arose, and for a long time practiced their trade without punishment. Poisoning was used so much as a political engine of destruction that men of politics were ever watchful and wary for their lives.

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Mr. Rehburg, who had been with Mr. Honecker for thirty-three years, attended the Cleveland School of Pharmacy from 1899 to 1902. His son, Weldon, is now spending his second year in our School of Pharmacy.

In the Rehburg Drug Store there are four registered pharmacists, two of whom are on duty only part time. With everything new in the block, the store is in keeping and is very attractive. It does not seem very large as one steps inside the door, but when Mr. Rehburg says that there are eleven outside show windows to be trimmed, one realizes that it is quite a store. An adequate prescription room is in the rear and the basement is an interesting department of the store. One large room is called the laboratory where one sees drawers of crude drugs and large stock bottles. Away up in one corner are several long wires on which are strung the old prescriptions that the store has filled as far back as the year 1909; this all makes it evident that careful prescription-filling has always been a specialty with Honecker and Rehburg.

ATTEMPT TO END RADIO QUACKERY

A drive has been started to stop promoters of quack medicines from using radio broadcasting to advertise their fake medicines.

A bill has been introduced in the New York State Assembly to amend the penal law so as to prohibit the broadcasting of statements concerning medicines of any sort unless the statement to be broadcasted, together with a sample of the medicine, has been submitted to and approved by the State health officer in the district in which the station is located.

This drive was begun by Dr. Shirley W. Wynne, New York Health Commissioner, as a result of a survey made by the staff for some length of time.

"It seems that many of the charlatans who have been driven from the newspapers have found a haven to activity in radio broadcasting," said Dr. Wynne.

In many cases, the Commissioner reports, these wares have not been concocted by licensed physicians as sufferers are led to believe, but by "pitch men," vaudeville "strong men" and other commercially minded laymen.

The largest single group which has fallen victim to the radio listener of charlatan is composed of those who seek to reduce weight ac-

cording to Harry L. Hopkins of the New York Tuberculosis Association. Such medicines should be regarded with suspicion; for if they are not merely harmless, they may contain some violent poison which will bring about reduction at the expense of impaired health.

Another type of quackery now much heard is the patent system of calisthenics, through the use of which men are promised the strength of giants in a few weeks.

From Washington comes word which indicates that Congress may soon be called upon to tighten up the radio act by censoring programs, regulating advertising and distributing more equally the facilities of the states than is possible under the present laws.

—*Druggist's Circular.*

NATIONAL FORMULARY COMMITTEE ON REVISION

The Committee on Revision of the National Formulary is now organized with Professor E. N. Gathercoal as chairman and is ready to begin the responsible task of the revision of the N. F., which review will start concurrently with that of the U. S. P., following the pharmacopoeial convention in May.

The Committee is as follows:

Chairman: E. N. Gathercoal, Professor of Pharmacognosy at the University of Illinois.

Members: Gustave Bachman, Professor of Pharmacy at the University of Minnesota.

H. A. Langehan, Associate Professor of Pharmacy at the University of Washington.

Lewis Saalbach, Professor of Pharmacy at the University of Pittsburgh.

Paul S. Pittenger, Biochemist for Sharp and Dohme.

Wilbur S. Scoville, Pharmacist for Parke, Davis and Company.

O. A. Farwell, Pharmacognosist for Parke, Davis and Company.

H. V. Army, Professor of Pharmaceutical Chemistry at Columbia University.

Bernard Fantus, Physician, Professor of Therapeutics at Rush Medical College.

Leonard Seltzer, Retail Pharmacist in Detroit.

E. L. Newcomb, Secretary of N. W. D. A.

S. L. Hilton, Retail Pharmacist in Washington, D. C.

I. A. Becker, Hospital Pharmacist in Chicago.

Glenn L. Jenkins, Professor of Pharmaceutical Chemistry in the Maryland College of Pharmacy.

A. B. Nichols, Professor of Pharmacy at the Philadelphia College of Pharmacy and Science.

It is noteworthy that while only two of these are retail druggists, a large majority have been active in retail pharmacy. Of the committee of fifteen, seven served on the Revision Committee in 1920.

STUDENT COUNCIL DANCE

"Every man dance with the girl to his right!"

Hmm—not a bad idea; how is it I haven't noticed her before? Nice dancer too—the evening is improving every minute. Let's see whom the Dean has picked. Oh, there he is, grinning from ear to ear; seems as though everyone likes Jack Horwitz's idea of this grand mix-up of dancing partners. There's Mrs. Spease trying to look serious while Bill is so sure he is making a good impression. Here's Dr. Bacon, but where—oh, there's Mrs. Bacon way over there. Everybody, faculty included, seems hopelessly mixed up and as happy as an energetic flea on a lazy dog's back. Say, where's the girl friend? I'll be—she would have to pick the best looking guy in the crowd. Oh, well, I didn't do so badly myself. Now, what is going to happen?

Ouch, who kicked me in the shins? Another grand rush to the center of the floor and my name will be "Mangle." Let's see, whom have we here? "Hello, you're Joe Pharmic's girl friend, aren't you? Isn't the music great? Well, well, I hope this number will be a long one."

Now to get back to the regular program.

"Oh, here you are. Let's go and get some more punch. It's really good, isn't it? Wonder how it would taste to dunk some of these cakes in the punch—must try it sometime."

The Woman's Club was a fine place to hold the dance this year; don't you think so? This is the one thing the Student Council has done properly. They are surely giving everyone a good time tonight. Do you want me to point out the committee who arranged the affair? See that rather heavy young lady over in the corner; that's Lucille Bickford. There's Alex Celke, that good-looking boy right here, who is dancing like a—a—well, never mind that; and the third is Steve Sabo, the little fellow over near the punch. He is a freshman, but, nevertheless, a fine chap.

"What—time to leave? I suppose we have to quit some time, but it surely is a shame to break up such a good time."

"Where'll we go now? Really, are you too tired, and not at all hungry? Oh, well."

PROFESSOR COOK VISITS CLEVELAND

Doctor E. Fullerton Cook, professor of operative pharmacy in the Philadelphia College of Pharmacy and Science, visited our school on the eleventh of April. In the evening he addressed the Northern Ohio Branch of the American Pharmaceutical Association on matters pertaining to the revision of the United States pharmacopoeia.

Prof. Cook has participated, one way or another, in the general committee of revision work for the last thirty years. Since 1920 he has been chairman of the revision committee and is recognized, both in this country and abroad, as an expert in all matters related to pharmacopoeial revision.

Prof. Cook prefaced the main part of his address with a most interesting account of the contacts recently established by himself in England with members of the revision committee now at work revising the British pharmacopoeia. The interest manifested by them in our own drug standards presages, in Dr. Cook's opinion, a future full of cooperation between English speaking peoples all over the world, as regards pharmacopoeial matters. Furthermore, because of the already far flung use of the British pharmacopoeia and the growing use of our own among the Spanish speaking of the Pan-American countries, one can vision a well-nigh universal adoption of common drug standards before the close of the present century.

When you are ill visit your doctor and have your pharmacist fill the prescription.

JUST AN OLD BELGIAN CUSTOM

The customer in Belgium who rouses a pharmacist from his bed in the wee hours of the morning, pays more for his prescription than were it filled during store hours.

In Belgium an official price list sets forth the amounts to be charged for practically every article. A special fee of five francs is added if the pharmacist is disturbed between the hours of eight and ten at night, and between the hours of ten at night and eight in the morning this fee is raised to seven francs.

The Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University.*

Editor LUCILLE BICKFORD, '30
Associate Editor ROBERT FITCH, '31

Business Manager HARRY VALWAY, '31
Faculty Adviser PROF. N. T. CHAMBERLIN

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Abe Harris '30
Myer Karner, '30
Otto Wolfert, '30

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Seymour Cohen '33

BUSINESS

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Bertha Grosser '32

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VOL. 4

WESTERN RESERVE SCHOOL OF PHARMACY

Cleveland, Ohio

No. 2

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EDITORIALS

THE EVOLVING DRUG STORE

Under the laws of the state of Ohio and most of the other states of the union, a "drug store" is a place where physician's prescriptions may be legally compounded. In other words, no place of business has a right to call itself a "drug store" by the usual sign display, unless it is legally qualified to compound physician's prescriptions. While, in a general sense, the sale of "poisons," "drugs" and "pharmaceutical preparations" is limited to "drug stores," there are, in Ohio, no less than forty definite exceptions with a possibility of an indefinite number of other exceptions, depending upon court interpretations because of the phraseology of the statutes, such as "other similar preparations." A like state of affairs seems to exist to the same or greater extent in most of the other states.

Therefore, "a place where physician's prescriptions may be legally compounded" is really the significant qualification that sets the drug store apart from other retail establishments, and it is this differentiation with which we briefly wish to deal. In a thoroughgoing discussion of this matter we might well inject into it at this point a discussion of the inroads of so-called commercial pharmacy, chain-store activity and other forms of aggressive merchandizing that give no thought to professional service, but, nevertheless, carry on under the protecting mantle afforded by the prestige of "pharmacy." We are not unaware of the ever-changing trends in all present day activities—evolutionary changes in pharmaceutical practice are to be expected—but there is one phase of the matter which particularly interests us at this time.

If the significant thing about a drug store is the fact that it is a place where physicians' prescriptions may be legally compounded, are we not justified in employing the current piquant vernacular and adding the words "and how?" We believe the hand-writing is on the wall. Physicians are becoming aware of the fact that somewhere in the neighborhood of 90% of all types of drug stores not only lack proper dispensing facilities, such as space, sanitary arrangements and laboratory equipment, but also give a minimum of effort and time to the science and art of dispensing, which is emphasized by lack of the most common reference works dealing with professional pharmacy. In too many drug stores the prescription is treated as a nuisance because it may take the operator of the store away from the front with the consequent loss of several sales of merchandise in no way related or allied to the drug business as measured by public health standards.

It must be acknowledged that this state of affairs has had its influence on the medical profession by way of making more dispensing physicians. According to a questionnaire survey sponsored by *Medical Economics* it appears that from 15% of the physicians in the larger cities to 40% in the smaller towns dispense exclusively and from 45% in the larger cities to 20% in the smaller towns do no dispensing. It is true that there are several factors that have to do with the making of a dispensing physician but we are firmly convinced that the successful and prosperous physician does not wish to dispense. It would seem that this statement is supported by the above percentage figures. Furthermore, the above mentioned state of affairs is rapidly influencing the public

to have less respect for and confidence in the drug store as a place of professional practices and quality products.

Already there are signs of the medical profession, through its various organizations, taking steps to remedy the situation, insofar as its own welfare is concerned in having its orders, by way of prescriptions, properly executed. The only wonder is, that the medical practitioners have hesitated so long. If those pharmacists interested in the professional side of the business will take advantage of the opportunities that lie before them by cooperating with academies of medicine and similar medical organizations, there is but little doubt that the day can be hastened when two classes of drug stores will exist and the differentiation in the public mind will be clear and distinct. One class will virtually be an approved list—the approval being sponsored jointly by one or more professional pharmacy and medical organizations of recognized standing.

Whether such an approved type of store does or does not confine its activities to strictly professional pharmacy alone is not of vital importance, in our opinion. In a recent news bulletin issued by the Drug Trade Bureau of Public Information, Dean C. B. Jordon of the Purdue University College of Pharmacy points to the fact that a gradual separation of commercial pharmacy is taking place; that the process is evolutionary rather than revolutionary, and that in the course of time we may reasonably expect *many* exclusive prescription stores in our larger cities. It is pointed out that such stores "must be located near the offices of a large number of physicians."

While the exclusive prescription store may be the fullest consummation of professional pharmacy, its field will always be very limited and for this reason we believe the "evolutionary" trend is toward the type of some of our better professional stores, somewhat highly departmentized, but free from the miscellaneous merchandise that never was and is not now related to public health activities.

THE CAPPER-KELLY FAIR TRADE BILL

Nothing short of victory may well describe the result of the efforts of Congressman Kelly, the National Association of Retail Druggists, state and local pharmaceutical associations, and individual advocates, when the house committee on interstate and foreign commerce favorably

reported the Capper-Kelly Fair Trade Bill HR11 to the house by a vote of twelve to eight. The bill was given little consideration when first sponsored sixteen years ago by Congressman Clyde Kelly of Pennsylvania and Senator Arthur Capper of Kansas, but since, it has slowly gained friends until there is a chance of its passage in Congress.

The purpose of the bill is to legalize contracts between manufacturer and retailer to maintain resale prices. The bill which when referred to the house will carry the designation of "Report No. 536, 71st Congress, second Session, House of Representatives." Representative Merrit of Connecticut submitted the report giving it the title of the "Resale Price Bill." It is an exceptionally brief bill covering a little more than four pages.

The possibilities of its passage depend to a large extent upon the attitude taken towards the bill by the three great economic groups of the business world, the consumer, the manufacturer, and the retailer.

An inquiry conducted by the federal trade commission showed that the great majority of consumers are opposed to the legislation. A questionnaire submitted to twenty-two thousand members of the consuming public under the supervision of the federal trade commission brought back one thousand nine hundred and ninety replies or less than ten per cent of the consumers addressed. Of this number a little more than the majority signified their disfavor towards legislation. However the result of this questionnaire is by no means discouraging to the advocates of fair trade legislation.

I believe it can be said that the manufacturer holds an equal interest in the fight against "Predatory Price Cutting." The federal trade commission has shown that thirty-eight per cent of the manufacturers supplying the drug trade believe that price cutting inevitably decreases volume while less than three per cent believe that price cutting increases volume. This has not always been the accepted opinion of the manufacturer since for many years the manufacturer regarded price cutting as a means of stimulating trade.

Perhaps many of the chain retail stores will oppose price maintenance legislation. Several chain store operators have issued statements as to their attitude towards the bill. Mr. D. C. Keller, president of the Dow Drug Company of Cincinnati, although formerly opposed to legislation, now favors the enactment of the bill. Another chain operator, W. T. Grant,

head of the W. T. Grant Chain Stores, in an address before the National Chain Store Association, indicated his favor of price maintenance. Hence the above shows that the chain stores are not unanimous in their disfavor of legislation.

The Capper-Kelly bill is a means toward an end. It is not the solution to present unsatisfactory conditions in pharmacy but will provide a "square deal" to those who believe in and practice true, ethical, professional pharmacy. A letter expressing our views and written to our Senators will aid considerably in convincing them of the justice of the bill.

DR. ARNY—NEW DEAN OF COLLEGE OF PHARMACY OF CITY OF NEW YORK

Henry Vincome Arny, Ph. M., Ph. D., F. C. S., has been appointed to succeed Dr. Henry Hurd Rusby as Dean of the College of Pharmacy of the City of New York, Columbia University. Dr. Arny, who was at one time the Dean of the School of Pharmacy of Western Reserve University, has served as the President of the American Pharmaceutical Association, has been the recipient of the Remington medal and has been on the revision committee of both the U. S. P. and the N. F.

ILLICIT TRAFFIC IN DRUGS

The Central and South American states, according to the League of Nations advisory committee on traffic in opium and other narcotic drugs, have made slow progress in the ratification and enforcement of the international opium conventions. Illicit traffic of drugs is extending to almost every part of the world. Egypt is being flooded to such an extent that it is estimated that of their population of fourteen millions, one-half million are addicts. Cocaine is streaming into India and Malaya from centers only partly known. Drugs are being smuggled in large quantities into the United States. The committee has issued a document showing that twenty-eight governments have expressed willingness to recognize eucodol and dicodide as dangerous narcotics and that nineteen governments have agreed that dilauidide, benzyl morphine and the morphine esters generally shall be brought within the scope of the Geneva Convention for the control of narcotics.

A. M. A. Journal.

CLEVELAND COLLEGE

If there is one place where vacations never assume any great importance, that place is Cleveland College. The students admit themselves to be students. However there is a certain amount of lively spirit which can only be termed collegiate. One may secure ample proof of this at any time in the large reception room just inside the main entrance. Such remarks as these are frequently heard:

"That written was a snap, wasn't it?"

"Hey, don't kid her."

Since Cleveland College began its career in 1925, it has grown rapidly. Just to compare the enrollment of 1928 with that of this year: the student body in both day and night classes last year was 3,358; this year it is 6,130. Students have been drawn from so many walks of life that anyone who is not taking a course must feel guilty for not showing the proper interest in his education.

The most popular courses are those in business administration, in psychology and in college English composition. It may be a surprising fact to some of us, but the course in English just mentioned is so large that there are twelve sections of classes.

On the faculty of the College are thirty-six exchange Professors from Adelbert College, thirty from the College for Women, twenty-four from Case School of Applied Science, six from the School of Pharmacy, three from the Library School, two from the Dental School, two from the School of Education, one each from the Medical School, School of Architecture, Law, Nursing and the School of Applied Social Science. The remaining members of the faculty are sixty-nine in number. Some of these are full time professors, but most of them give only part of their time to teaching; their outside activities and occupations vary almost as much as those of their students.

The College is indeed fortunate in having secured as varied and as respected a faculty, but the faculty is likewise fortunate in having audiences conveniently waiting at all hours. Many people who did not yield to temptation and take teaching as a profession, may now satisfy that ambition in Cleveland.

He—"This dining-room table goes back to Louis XIV."

He—"That's nothing. My whole sitting-room set goes back to Sears-Roebuck on the fifteenth."

—Drug Bulletin.

ASSEMBLY NOTES

At a recent assembly, Mr. Geo. Van Gorder of the McKesson Hall-Van Gorder Company presented to the students the plan by which the company he represents is trying to aid retail pharmacists of Cleveland in carrying out successful business.

Following an explanation of the types of stores in the city, those which have price only as their appeal to the public and thereby prove a detriment to the manufacturer, wholesaler and retailer, and those in which pharmacy still retains its professional side, the dealers catering chiefly to physicians and upholding the tenets of the art, Mr. Van Gorder pointed out the advantages of sales organization.

Introducing the so-called McKesson-Robbins' plan, the speaker followed the history of this company from its beginning. About one hundred years ago in New York, the McKesson-Robbins Company started as wholesalers, its sales force covering the entire country. As the enterprise grew, some manufacturing crept in and developed to such an extent that the wholesale business was discontinued several years ago. Out of this, a new policy arose. Distributors were obtained about the country, fifteen representing the merger eighteen months ago. And some idea of the popularity of the plan may be had when one considers that this representation has jumped to sixty-four at the present time.

In addition to carrying a complete stock to supply the wants of the retailer, it is the aim of the McKesson-Robbins' jobbers to aid him in whatever manner they may. Their merchandising department in New York stands ready to give immediate and concrete information to the retailer; their bureau of soda-fountain administration will give helps which make for a profitable soda business; and other departments which they maintain will furnish similar advice concerning store management. Since the cost of publicity is prohibitive for the independent dealer, McKesson-Robbins have assumed this item in the form of radio programs, full-page advertisements in the Physicians'-Times Magazines, and the supplying of the McKesson-Robbins' "Symbol of Service" to the retailer.

In closing, Mr. Van Gorder stressed the importance of the retailer to the wholesaler. The latter must depend upon the former for existence, hence it is the object of the wholesaler to do all in his power to make better merchants out of the retailers. And it is by the recently

formulated plan that those concerned hope to attain this end, Mr. Van Gorder already predicting bigger and better achievements for the retailers who will follow its designs.

Doctor Robert Nelson Hoyt, associate professor of biology of Western Reserve University, visited the student assembly on Wednesday, March 12 and gave an illustrated lecture on malaria and the malaria mosquito.

After showing slides contrasting the mosquito (*Anopheles*) carrying malaria germs with species not carrying the organism, Doctor Hoyt explained both the life cycle of the mosquito and that of the malaria parasite within the human body. The female lays her eggs on water, perhaps a hundred to a batch, the larvae form parallel to the water's surface, the pupae stage is passed and finally adult development occurs. The female mosquito, in accordance with the saying that "the female of the species is more deadly than the male," is the spreader of the disease by biting an infected person and transferring the parasite by subsequent injection into one not affected. As for the male, he never bites and his diet is strictly vegetarian.

When the female bites an individual, she injects a cigar-shaped organism which enters the red cells of the blood. The protoplasm of the parasite increases in size until it finally fills the whole cell, the process requiring about forty-eight hours. At this stage daughter cells form, burst the cell wall and enter the blood stream to again go through the same process as the parent from which they are derived. This cycle is typical of the malaria parasite prevalent in the United States, but Doctor Hoyt also explained the types of malaria known as "tertian" and "quartan," both of which are rare in this country.

While malaria was formerly a constant dread for persons in regions where the disease existed, science has developed methods which have control almost to the final degree. Since the mosquito breeds in water, means such as drainage, stocking with fish and spreading oil to kill larvae by preventing their breathing, have come into use. Means of prevention and cure have extended to man also, the specific action of quinine against malaria parasite being employed constantly in the treatment of the disease. And the efficiency of both modes of control may well be appreciated when one considers that malaria cases are relatively few now compared with their common occurrences before science had developed its methods to combat the parasite.

EDWARD DAVISON

Grumbling murmurs arose about the bulletin board on the morning of Tuesday, March twenty-fifth, in the halls of the School of Pharmacy: "Assembly today at 12:00—Attendance compulsory." It looked like an extra assembly and assembly at best is none too popular, not because the speakers are unpleasing (they often prove to be most interesting) but because anything that interferes with the gentle process of noonday mastication is obnoxious to the normal student. Therefore the applause at the end of the hour—and it was a full hour—was in itself a tribute to an assembly speaker such as has never before been offered by the students of the school.

To the reluctantly-seated assembly the Dean introduced Mr. Edward Davison, a poet and critic, who is associated with "The Saturday Review of Literature;" the winner of a Guggenheim fellowship in creative writing; and the speaker who gave the McBride lecture the previous evening. "Oh, yeah?" was the unspoken response of the listeners. The chosen wits of the school whispered scintillating remarks to their neighbors; the sleepy spectators allowed their heavy eyes to drop another eighth of an inch.

Mr. Davison advanced to the front, seated himself nonchalantly on top of the desk and began to talk. He told us in his frank and picturesque manner that we and most people in common had the wrong idea of poets and poetry. The basis for this misconception began with the rise of a new school of poets in the late nineties in England, one of the leaders of which was Oscar Wilde. People thought of these poets as lanky, long-haired individuals, who went around gazing at a lily; men who wrote of the ornamental, "pretty, pretty" things; men who were chiefly concerned with the aesthetic and unpleasant.

Poets, Mr. Davison assured us, do not conform to type; the idea that they are all alike is preposterous. They come from all ranks of life, with much education or with none; with high morals or low, with strong characters or weak. Robert Burns was the son of a farmer; William Shakespeare, a practical theatrical manager; John Keats, a surgeon's assistant and a chemist; Byron, a champion swimmer. Christopher Marlowe was killed in a tavern brawl and Milton defied Royalty at the risk of his own life.

Real poetry is a genuine expression of feeling. If one does not like poetry, it is often not

because of an inability to understand it, but to understand one's self. Feelings do not change; they are common to all times and to all people; they are the same today as they were four thousand years ago. With great poetry the reader is on trial more than the poem itself. This general inability to understand the genuine expression of feeling is only too manifest in the great popularity of certain of the dance numbers of today. A public educated to appreciate nobler forms of rhythm would not so unhesitatingly embrace such songs as, "If I had a Talking Picture of You," and "Hello, Baby," but would turn to the lyrics of Burns or Campion, even disregarding the works of Eddie Guest, whose verse is poor not because of a lack of ideas, but of form.

These ideas, the basis of the talk, were not new to most of us. No one could have impressed upon our minds more the fact that true poets are not sickeningly effeminate and half-witted. There was not one of us who did not change his conception of poets and poetry. We know now that poets can be real men and likable; we know that there must be something worth-while in poetry. But, above all, we know that we are willing to postpone our lunch for hours at any time to listen to Edward Davison and no one can conceive the magnitude of such a tribute except the student himself.

THE HOMESICK PHARMACIST

(Tune—*Juanita*)

Swift from the test-tube
Comes an odor sweet and strong.
Far through the building
Works its way along.
'Tis a fragrance pleasant
As the roses' nectar rare,
And it grips my heart strings
Like a maiden fair.

Chorus—

Hydrogen sulphide,
Let me smell thy breath again;
Hydrogen sulphide,
Come o'er moor and fen.

Far from the test-tubes
And their bubbling contents sweet
Condemned to wander
With weary feet.
How my heart is aching
And my eyes with tears grow dim
When I think of sulphide
And of hydrogen.

Chorus—

FRATERNITIES

ALPHA ZETA OMEGA NEWS

At a recent get-together of the Alpha Zeta Omega fraternity, held at the Rainbow Room of the Hotel Winton, Frater Al Baskind was appointed chairman of the National Convention which takes place this June. Things planned are a boat trip to Cedar Point, a dinner dance at the Wickliffe Country Club, and a formal banquet at the Winton Hotel.

If you think that being initiated is a pleasure ask M. Resnick, S. Eisenberg or M. Lessowitz. They will testify to the ability of certain A. Z. O.'s to carry on an inquisition in a satisfactory manner. "Remember that the arrow marks the exit."

The present is somewhat similar to the past: the boys are still pursuing better halves. We find that Dave Cowan of '25 is a newly married man; Bill Sellman of '23 and Roy Scott of '28 are among those recently engaged.

M. Schoenberg is a prosperous store owner and M. Spiegel is part owner of the L. and S. Drug Company.

N. Weintraub in addition to being the manager of the Kurlander Pharmacy is a graduated radiotrician.

Roy Scott, formerly with the Shaw Pharmacy, is now an employee of the Miller Drug Company.

Frank Lattin of '26 is a partner in the Latin-Wohl Pharmacy.

KAPPA EPSILON NEWS

Mrs. Spease, Mrs. Harris and Miss Kranskas were the guests of honor at a formal dinner given at Park Lane Villa on March the nineteenth, when they were initiated as associate members into Eta chapter of Kappa Epsilon.

Final arrangements are being made for the Spring Formal which will be a dinner dance at the Lake Shore Hotel on Friday, May the ninth. The music will be furnished by Lou Wolfert and his Aristocrats.

An Alumnae Chapter of Kappa Epsilon was organized on Wednesday, April the ninth, when Mrs. Spease entertained with a dinner the active chapter and the alumnae of Eta chapter. Four actives and nine alumnae members were present. The following officers for the new chapter were elected: president, Ruth

Johns; vice-president, Carrie McDowell; secretary, Helen Kadel; and treasurer, Ethel Albrecht. Up to this time there have been only three Alumnae Chapters of Kappa Epsilon, so we are quite proud—being the youngest chapter—to be able to establish an Alumnae Chapter.

Emma Pejisa, who is attending the University of Michigan, spent spring vacation with her parents in University Heights.

KAPPA PSI NEWS

February initiations brought four new men into the chapter: Donald Kaufhold and Steve Sabo, new men at the school this year, and John Obester and Winton Webb, pledges of last year. After successfully weathering the storm of pledgeship, they are blossoming forth in the aftermath as worthy co-workers, promising much for the future of the chapter.

Election of officers followed closely upon initiations, and the new fraternal year opens with the following men in office: Regent, A. Celke; vice-regent, R. Fitch; secretary, R. McArtor; treasurer, Schweickardt; historian, Lauria; chaplain, Webb; grand council deputy, Neely; and editor of the Beta Gram, Kaufhold. With new men in the chapter and new officers in charge of the fraternity, the occasion warranted a house party which was accordingly held on March the seventh. The happy event was chaperoned by Mr. and Mrs. Davy and Mr. and Mrs. Edwards.

A state convention, something new in the annals of Ohio chapters, was conceived at Beta Beta lately by Harry Valway, past regent. Through his efforts the chapters of Ohio met in Columbus on the fourth and fifth of April. Nearly all of the members of this chapter journeyed down by auto to discuss fraternal questions.

"Petting," says Dr. H. H. Horne of New York University, "involves emotional excitement."

"You wouldn't be kidding us, would you Doc?"

—*Boston Beanpot.*

ATHLETICS

Joe Eisenberg, 135 pounder, established his superiority as boxer in that class in the University by his victory over George Huston, an Adelbert boy. In the first round of the fray, there was simply an exhibition of sparring. In the next round, during the first ten seconds, the heavily tanned representative of Pharmacy School came out from his corner with a row of rights and lefts, especially a hard right. This hard right received on the jawbone of Huston caused that worthy to slump and Joe did not continue with his barrage. Charlie Bill, cognizant of boxing rules, especially in the case of a knockout, awarded the battle and, as a result, the championship of the 135 pound class to Eisenberg.

Anthony Castrovinci, alias Kid Castro, showed his boxing blood by whipping Eddie Hull, runner-up for the 125 pound championship last year. Throughout the three rounds of the battle "Kid Castro" showed his superior knowledge of pugilism by gaining an edge in each frame. Because of this evident margin Charlie Bill awarded the decision and as a result the championship of the 125 pound class to Castrovinci.

It is the first time, by the way, in its history that Pharmacy School has produced two men who have competed and won championships in boxing.

GREEN TORNADOES COME TO LIFE

The local boys finally got the old smooth running combination into play. With Miskie and Karner at forwards, Fitch at center and Valway and Kaufhold at guard, the team has shown its superiority. With this starting combination and Celke, Lauria and Farris in reserve, the pharmacs have been making life miserable for their foes.

During the week of February ninth the home pride defeated the Trinity Stars in a close contest as a preliminary to the Reserve-Hiram game. Two days later they drubbed Adelbert College 33-20. Incidentally the victory over Adelbert gave Pharmacy the undisputed position of first place. This has certainly been an incentive to the squad who are working hard for their letters.

Harry Valway has been playing an exceptionally good floor game and certainly is giving his hardest fight for the team. Karner has retained his position as leading point-scorer in the league. Miskie is also playing a good scoring game at forward. His follow-up shots have attracted much notice. Bob Fitch seems to have forgotten that his trick knee bothers him and as a result has been playing bang-up ball at center. Kaufhold's guarding has been holding opposing forwards to very few points. Lauria has displayed versatility in being able to play any position as well as that of the man he replaces. Celke has shown flashes of professional basketball when working the pivot play. Farris has shown opposing forwards that he means business for his fighting qualities have proved valuable upon occasions when the score was close.

PSITTACOSIS

The latest fashion in the way
Of microbes and their capers
Is urged upon us every day
In all the daily papers.

Appendicitis is old stuff
Stale news is such neurosis;
The patient who is up to snuff
Must now have Psittacosis.

We catch our ills from little bugs
And rats and fleas and skeeters;
Hay fever lurks in old fur rugs,
Untouched by carpet-beaters.

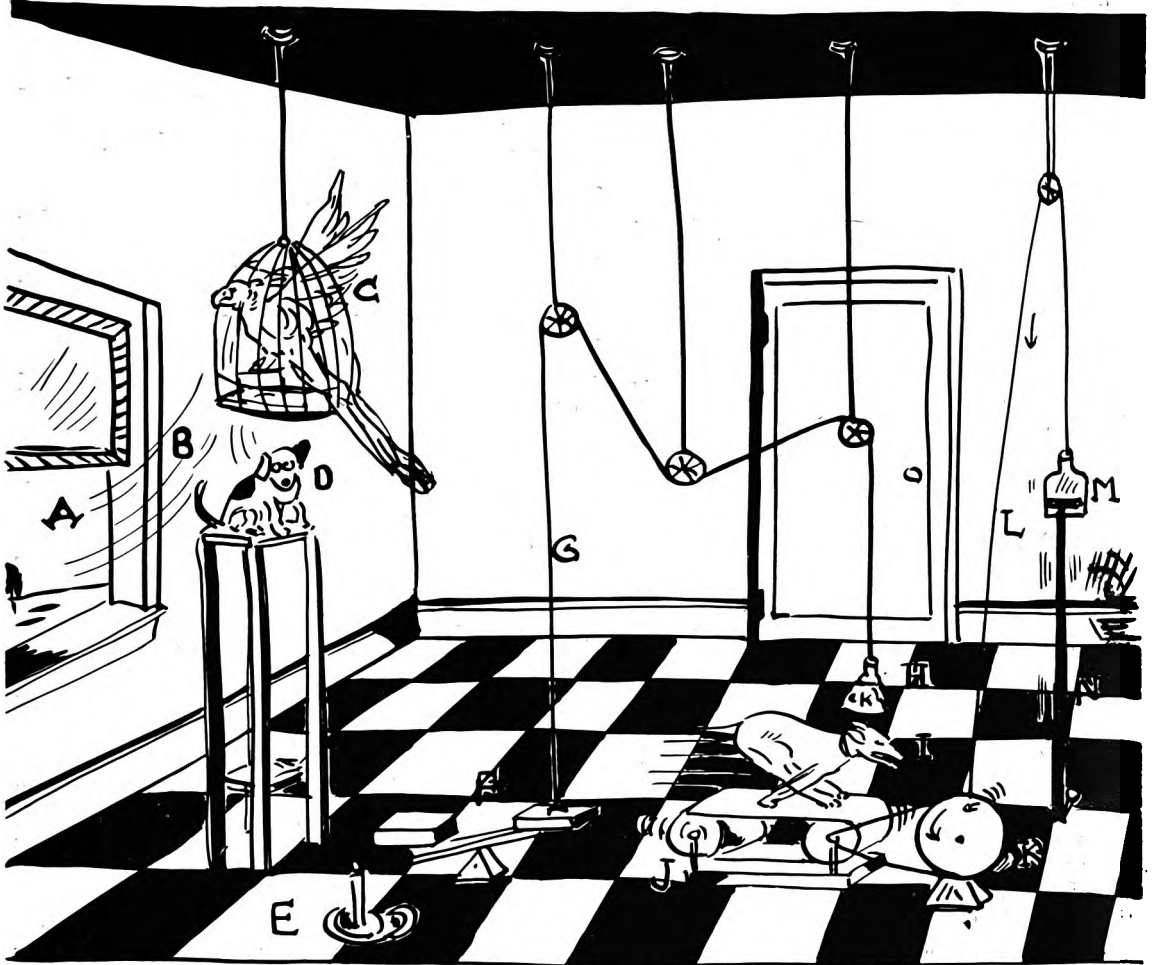
From hooch we get assorted snakes
And bats infest our garrets.
But here's a bunch of bellyaches
To be acquired from parrots.

Alas, I fear that it is not
A new thing in our nation;
We've learned from parrots now a lot
Of social conversation,

Let those whose joy is to repeat
All trite, bromidic folly
Accept the bitter with the sweet,
And catch their death from Polly.

Ted Robinson in *Cleveland Plain Dealer*

THE INVENTIONS OF DR. AURANTII KORTX, U. S. P.



DR. A. KORTX'S LATEST INVENTION CONSISTS OF THE OPEN WINDOW A, THROUGH WHICH COMES A GUST OF WIND B, THUS CAUSING PARROT C IN CAGE TO CONTRACT PSITTACOSIS AND SNEEZE UPON DOG D, WHO CATCHES COLD AND, SPYING CANDLE E, LEAPS DOWN IN ORDER TO WARM HIMSELF, BUT LANDS ON BALANCE F, THUS MAKING STRING G LOWER WEIGHT H, WHICH SAID 1000 KILOGRAMS CRASHES INTO CRANIUM OF DOG D'S BROTHER, I, MAKING HIM MOVE CAUSING TREAD-WAY J TO ROTATE AND INDIRECTLY TO MOVE WHEEL K ON WHICH IS A PEG TO WHICH PEG IS ATTACHED A CORD L, THE OTHER END OF WHICH IS FASTENED TO BOTTLE M, A HUGE RUBBER BAND N PULLS THE BOTTLE DOWNWARD AFTER BEING PULLED UPWARD BY CORD L, THUS SHAKING UP EMULSION OF COD LIVER OIL IN BOTTLE M AND FINISHING 'RX 12783 $\frac{2}{3}$.

Bruehler-'30

WHY A MERCHANT TURNS GRAY

Dear Sir,

I have your statement showing that I owe you \$769.80 and I am enclosing a check for \$5.00 for which please send me a receipt. I am sorry that I cannot pay more at present, as I am unable to collect from my customers, as money is so scarce right now.

My own living expenses are terrible and I can hardly get along. I will try to send you another payment of \$5.00 when I sell my hay, which should be in July. I cannot pay you more at that time for my daughter finishes at college this year—that costs a heap of money.

I thought I could send you a check when I gathered my cotton crop but it took all I could rake and scrape to put in the Delco lights as my wife did not have electricity to run the sewing machine and the vacuum cleaner. Then, too, we had to build a shed for the Ford so we could put the new Packard in the garage, and build a new concrete bridge over the brook in our front lot, as well as a new road, so we could get in and out better.

I cant send you the corn money in the fall because my son is going to college then, and although the lads of today are very economical about hats and garters, still a coon-skin coat costs the old man a lot and even junk yard Fords come rather high by the time they are decorated for college use.

I might send you the hog money, but the missus and I have planned a trip to Niagra this fall and after working all these years, I think she deserves a trip. We can't go before fall for she is having the house redecorated and refurnished, taking out all the red plush and putting in overstuffed cane and mahogany. This is a terrible strain on my pocket book, especially as the new well that was needed closer to the house and the new up-to-date barn have to be paid for.

All the farmers here are in a hard place financially, with strawberries this season at seventy-five cents a quart and the price of gasoline as it is. Then too, there is an epidemic among the married women to have their plain gold wedding rings platinized and set with diamonds and every body is having their tonsils and teeth removed.

"The Red Barrel."

*The pharmacist's greatest reward
is a duty well performed.*

I. What kind of medicine does the ice-man take?

U. Pond's Extract.

Q. Why is cold cream like a good chap-eron?

A. Because it keeps off the chaps.

Q. Of what disease would a Duke prefer to die?

A. Dropsy, because it is a swell disease.

BETTER LATE THAN NEVER

An old gentleman met a friend who asked him whither he was bound.

"I'm going to see 'The Naked Woman' at the cinema," he confided, "this is the third time I'm going."

"Is it so interesting?"

"Yes, a beautiful actress slowly undresses, and just at the moment when she is about to take off her chemise, a train passes and obscures the view."

"Is that all? And you go back for that?"

"Of course! How do you know the train won't be late some day."

Q. Why is a child with a cold like a blizzard in February.

A. Because it blows, it snows (it blows its nose)

Q. Why is a corpse like a man with a cold?

A. Because he is in a-coughing.

Q. Why is a doctor the meanest man on earth?

A. Because he treats you and then makes you pay for it.

"What is the matter, little boy?" said the kind-hearted man, "are you lost?"

"No," was the manful answer, "I ain't lost; but I'd like to know where father and mother wandered to."

Hey—"Well, I have my opinion of a man that will pour hot water down a hen's throat to make her lay hard boiled eggs."

Say—"That's nothing, I saw you trying the same thing on a rooster."

None of Your Business Trips

Boss (to stenographer) : How about going on a business trip with me next week?

Steno—Say, I may be your typewriter, but don't get the idea that I'm portable.—Ghost.

Things You Should Know

Shoes should not be removed at a banquet table until the fried onions are served.

A total eclipse is a towel hanging over a door knob.

Bananas have a smoother complexion than pineapples.

Elephant trunks will not shrink when worn in the water.

Gin making has increased the bath-tub industry 150%.

A "jimmy" is a little iron used by burglars as a nerve tonic.

Magazines can be defined as a game of chance, the object being to locate a needle of reading matter in a haystack of advertisements.

Money is a very peculiar disease having the following symptoms.

Those that have it seem to have no complaint at all and those who don't have it, have a great deal.

OLEOMARGARINE: Longer and STRONGER for butter.

Simp—"My sister eloped last night."

Bimp—"You don't mean it?"

Simp—"Yes, a horse ran away with her."

Myer—"If a goat would swallow a rabbit, what would be the result?"

Leo—"I don't know."

Myer—"Why, a hare in the butter, of course."

Jack—"Why is the Fourth of July similar to an oyster stew?"

Joe—"I can't imagine."

Jack—"Because it's no good without the crackers."

A. "Why is the school-yard always longer at recess?"

B.—"Give it up."

A.—"Because there are more feet in it."

Q. Why is a College student like a thermometer?

A. Because he is graduated and marked by degrees.

Q. Why is a steel trap like the measles?

A. Because it is catching.

Little Lou—"Mah mammy wants to know of you got any stylish color dyes?"

Druggist—"What does she want it for?"

Little Lou—"She done got de misery in her stummick, and de doctor says she must diet; an' she says if she hab ter dye it she want it some han'some color."

Jones—"Does he belong to the four-hundred?"

Smith—"Yes, he's one of the ciphers."

Em—"My boss caught me kissing the typewriter (not the machine) yesterday."

Me—"What happened?"

Em—"He says, 'See here, do I pay you to kiss my typewriter?'"

Me—"Well?"

Em—"And I replied that he didn't have to pay me, I was willing to do it for nothing."

One—"My wife came home today with a beautiful embroidered handkerchief, which cost twenty dollars."

Two—"Twenty dollars? That seems a lot of money to blow in."

A Good-for-Nothing, passing through a street, noticed a small shop where small rolls were for sale at one cent apiece. He selected three, then, just at the moment of paying, he saw a bottle of wine lying in some ice.

"Do you sell wine?" he asked.

"Yes, one cent a glass."

"I'll taste some."

He emptied his glass and returned one roll.

Then he had a second glass full and returned another roll.

"This is very good wine," he remarked, "I'll have another glass."

He returned his third roll and went out of the shop.

"Hey, you!" cried the shopkeeper, "you didn't pay for the rolls!"

"Why should I? Didn't I return them to you?"

And he ran away.

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ALUMNI NOTICE!

Plan to attend the Pharmacy
School Alumni Banquet on
the evening preceding Gradu-
ation Day—June Eleventh,
1930. Further information in
regard to this will be mailed
to you early in June.

REMEMBER THE DATE

WEDNESDAY

JUNE ELEVENTH

1930



Pharmaccon



Vol. 4

JUNE, 1930

No. 3

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

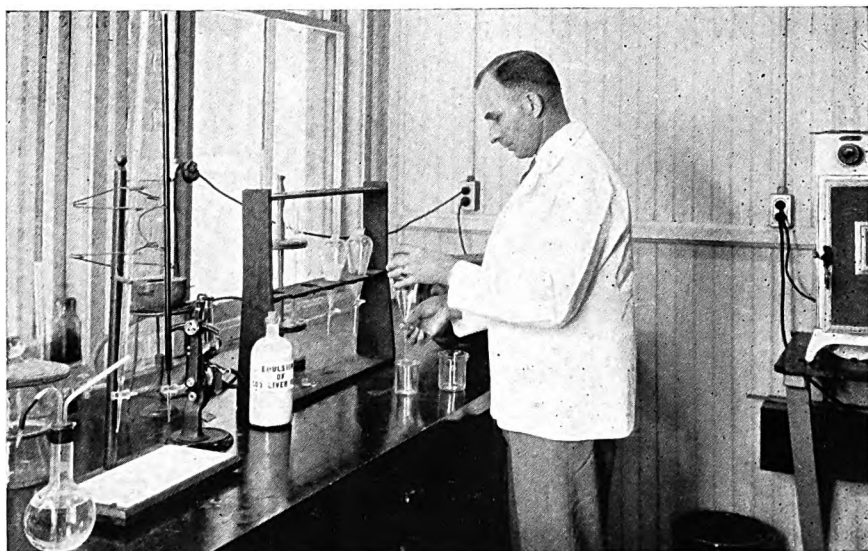
The United States Pharmacopoeial Convention

By Dean Edward Spease

Once every ten years, representatives of the medical profession, pharmacists, and representatives of pharmaceutical sciences meet in Washington for two days to outline policies for the revision of the Pharmacopoeia and to select the men to do the work. The convention is made up of delegations, no delegation having more than three delegates, from Colleges of Medicine and Pharmacy, from State and National associations of these professions, from some research institutes and from various branches of the United States Government. No local associations are represented save the three or four who were represented at the time of the 1900 convention when the Constitution and By-Laws were adopted. The Northern Ohio Druggists Association was one of these and in this manner secured its representation.

Cleveland was represented at the 1930 convention by Drs. Torald Sollman and F. C. Oldenburg, from the School of Medicine, Dean Edward Spease, Dr. F. J. Bacon and Prof. E. D. Davy, from the School of Pharmacy, Messrs. F. J. Cermak, E. R. Selzer and S. J. Sternicki, of the Northern Ohio Druggists Association, and Mr. H. E. Benfield, representing a Southern University. Cleveland was indeed fortunate to have Prof. E. D. Davy selected as one of the members of the next Revision Committee. Dean Spease was chosen as Third Vice-President of the Convention.

In forming the tenth revision, the physicians upon the Committee were charged with the duty of "Scope", that is, the items to be admitted to or deleted from the Pharmacopoeia. In this revision they will again be charged with "Scope", but in case of



Edward D. Davy, Professor of Analytical Pharmacy, W. R. U., will serve on two sub-committees of the general revision committee, viz.:
Inorganic Chemicals and Proximate Assays.

their ruling being unsatisfactory to any member of the Committee, the question is open to a vote of the entire Committee, and it will require two-thirds vote to rule against the wish of the physician members. Inasmuch as the Committee is made up of fifty members, seventeen of whom are physicians, it is probable that the findings of the physician members upon this subject will prevail.

The Nominating Committee of the convention is made up of the Chairman of each delegation of three or less. By gentlemen's agreement, the physicians met and selected their seventeen members, and the pharmacist-allied-sciences group met and selected its thirty-three. These fifty names were ratified by the convention. The officers of the convention were selected in open meeting of the Nominating Committee.

The officers elected to serve from 1930 to 1940 are: President, Dr. W. A. Bastedo, of New York; Vice-Presidents, H. A. B. Dunning, of Baltimore; Dr. J. F. Anderson, of New Brunswick; Edward Spease, of Cleveland; Dr. R. A. Lyman, of Lincoln, and Thomas Roach, of Oklahoma City. L. E. Warren, of the Department of Agriculture, was chosen Secretary, and F. A. Delgado, of the Department of Commerce, Assistant Secretary. Samuel L. Hilton, of Washington, was re-elected Treasurer.

The Board of Trustees are Dr. J. H. Beal, of Ohio and Florida, as Chairman; Samuel L. Henry, of Chicago; Dr. S. Solis Cohen, of Philadelphia; E. F. Kelley, of Baltimore, and W. Bruce Philip, of San Francisco. W. B. Day of Chicago, was chosen by the Board to be its Secretary.

The Revision Committee is divided into fifteen sub-committees. The chairmen of these sub-committees, a list of which follows, compose the executive committee.

Scope—Dr. Reid Hunt, Mass.
 Therapeutics—Dr. Henry A. Christian, Mass.
 Biological Assays—Dr. C. W. Edmunds, Mich.
 Biological Products and Diagnostic Tests—Dr. George W. McCoy, Washington, D. C.
 Botany and Pharmacognosy—E. L. Newcomb, New York.
 Proximate Assays—C. B. Jordan, Ind.
 Inorganic Chemicals—J. C. Krantz, Jr., Maryland.
 Organic Chemicals—George D. Beal, Penn.
 Reagents and Test Solutions—Ernest Little, New Jersey.
 Volatile Oils—W. O. Richtmann, Wisconsin.
 Extracts, Fluidextracts and Tinctures—Wilbur L. Scoville, Mich.
 Waters, Solutions, Spirits, Syrups and Elixirs—H. A. Langenham, Wash.

Cerates, Ointments and Miscellaneous Galenicals—Leonard A. Seltzer, Mich.

Tables, Weights and Measures—Theodore J. Bradley, Mass.

Nomenclature—A. G. DuMez, Maryland.

Having been elected chairman of the general revision committee, E. Fullerton Cook, of Philadelphia, will serve as chairman of the above executive committee, which is, in reality, the ultimate guiding force in all matters pertaining to pharmacopoeial revision.

SELECTION OF PROPRIETARY VERSUS NONPROPRIETARY DRUGS IN HOSPITAL PHARMACY

(Editor's Note: This article, written by Dr. Ernest E. Irons of Chicago, recently appeared in the *Journal of the American Medical Association*. Because of its significance, from the professional pharmacist's viewpoint, we are presenting the article here in its entirety.)

The growth of hospitals in number and in efficiency is one of the striking medical changes of the past twenty years. They have been equipped with modern operating rooms and x-ray, chemical and pathologic laboratories, and through their staffs are exerting a tremendous educational influence on the public. They are participating in the medical education of their interns and of their own staffs, who by study and contact with one another grow in experience and skill.

But the hospital drug room, which reflects directly the medicinal requests of the staff, has hardly kept pace with the modernization of other departments of the hospital. The shelves in some hospital pharmacies remind one of the exhibits of proprietary medicines in a chain-drug-soda-fountain-lunchroom. It will be of some interest to inquire why in some hospitals there should be so many proprietary drugs and mixtures prescribed, where of all places conditions for the prescribing of the simple standard remedies needed by the patient should be ideal.

Perhaps the first and obvious reason is that no one, except possibly the hospital pharmacist, has given the matter much thought. The physician prescribes a drug under the name he remembers best, and frequently drugs continue to be prescribed under their proprietary names long after

pharmacopeial preparations have become available. Many of us remember methenamine, long used as a urinary antiseptic, better under one of its many proprietary aliases such as urotropin. In other instances, manufacturers give a proprietary name to simple pharmacopeial drugs or mixtures of them and by insistent advertising, with startling claims, increase for a time the use of these preparations. The advertising value of a catchy name has the same force in medicine as in commerce.

We too frequently think in terms of disease names and medicines instead of in terms of pathologic physiology and the remedies which may promote the return to normal function. The correction of disturbed function usually calls for one remedy, and, if but one is required, the inclusion of others is unnecessary. Proprietary mixtures are needlessly complex, and, if the patient requires a certain remedy, it is hardly fair to burden him thoughtlessly with a lot of other things he does not need. In case the administration of combinations of drugs is desired, these may be made up from single doses in the hospital stock or prepared in the hospital pharmacy to meet the needs of each special case.

The Dangers of Proprietary Prescribing

The evils of proprietary prescribing arise not from the mere fact of the sale of a drug under a proprietary name but from the circumstances attendant on its distribution and its popularization under claims misleading alike to physician and to patient, which lead to its use in ways directly harmful to the user. The manufacturer who by real research discovers a new and efficient remedy is entitled to the adequate commercial reward insured by the use of a proprietary name. This principle is recognized by the Council on Pharmacy and Chemistry of the American Medical Association, and worthy original products are recognized under coined names. The Council has rightly held, however, that the name should reflect the composition of the product and not the clinical use to which it is put.

Besides the frequency with which proprietary remedies are advertised under unwarranted and misleading claims, other objections to their use are the added expense in their purchase, which is passed on to the ultimate consumer, the patient, and the tendency of their use to increase self-medi-

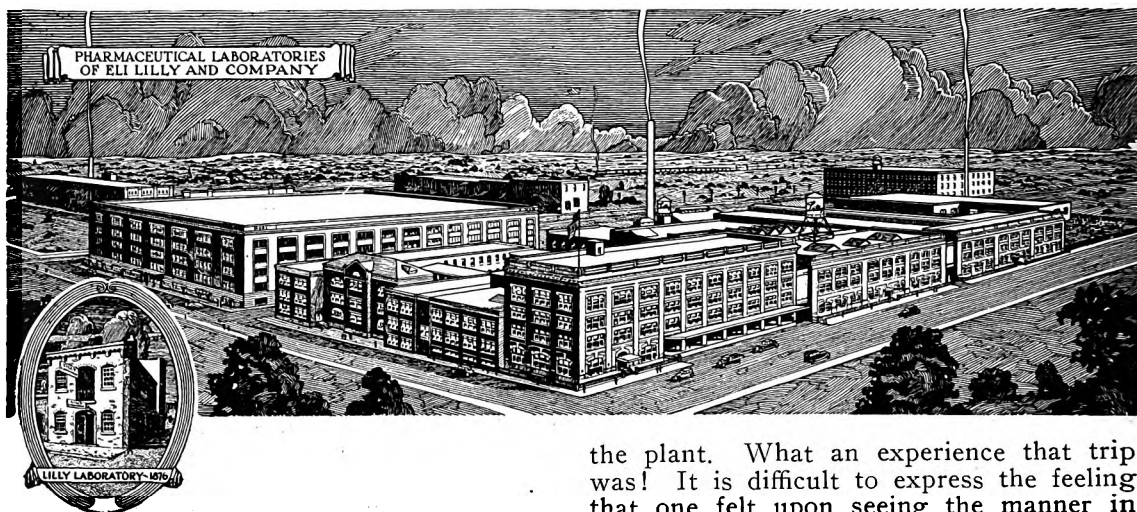
cation, a practice that leads often to serious harm to the patient. A recent instance of the harm that may result from unsupervised self-medication is furnished by cinchophen, one of the newer drugs used in arthritis and other conditions, in part for its analgesic action, and extensively advertised under proprietary names as well. When used in small doses for short periods it appears to be safe, but in a number of cases fatal injury to the liver, with symptoms resembling acute yellow atrophy, has resulted in patients who on their own responsibility have taken large doses over long periods. The danger to the public of self-medication, which begins through the prescribing for patients of proprietaries by physicians and interns in hospitals, is serious and calls for a careful review of habits of prescribing by the attending staffs.

The more vicious opium-containing "patent medicines" have largely disappeared, but occasionally, even now, an opiate-containing proprietary appears under an entirely uninforming name and for a time gains access to the hospital pharmacy. Some remedies, such as theobromine sodiosalicylate, widely advertised years ago as diuretin, are now occasionally prescribed under their proprietary names because physicians forget for the moment their real composition.

Styles change but competition remains. Just now a number of drug houses are interested in the production of hypnotics of the barbitol group, each manufacturer vying with the others in attempts to produce a new modification, for which claims of superiority may be made. These hypnotics in general differ little from one another but add materially to the length and expense of the drug list of the hospital pharmacy. Less creditable still is the practice of combining two drugs in fixed proportions in a mixture which is given still another name, and sold with claims of doubtful credibility.

Mixtures of a hypnotic and an analgesic—under a proprietary name generally uninforming—have been foisted on the medical public, thereby hindering the advancement of rational therapy. These preparations are generally marketed by firms who desire the confidence of the medical profession but who on the other hand, find it "good business," commercially speaking, to exploit these preparations of active ingredients in fixed proportions not only to physicians but

(Continued on page 12)



WE VISIT ELI LILLY & COMPANY

By H. F. Valway, '31

Monday, May 5

Leave Cleveland	8:40 A. M.
Arrive Indianapolis, Hotel Severin ...	2:35 P. M.
Dinner, Hotel Severin	5:30 P. M.
Theatre Party, Indiana Theatre	7:30 P. M.

Tuesday, May 6

Breakfast, Hotel Severin Roof Garden	7:30 A. M.
Inspection of Lilly Pharmaceutical Laboratories	8:30 A. M.
Luncheon, Lilly Cafeteria	12:20 P. M.
Special Bus to Lilly Biological Laboratories, Greenfield, Ind.	1:00 P. M.
Inspection of Lilly Biological Laboratories	2:00 P. M.
Dinner, Page's Chicken Dinner Place	5:30 P. M.
Address, Lilly Officials	6:30 P. M.
Leave Indianapolis	11:30 P. M.
Arrive Cleveland	7:40 A. M.

The above itinerary recently comprised two "red letter" days in the lives of sixty-five students of Pharmacy School. These two days were as full of entertainment and instruction as any ordinary school week.

Even our late arrival in Indianapolis did not prevent Lilly's from beginning their program. We were met at the train and conducted to the Severin Hotel where rooms were assigned and dinner announced for five-thirty. After an exceptional dinner and a brief address by Mr. Clark of the Lilly Company, we were presented with tickets for the Indiana Theatre. The next morning, after what seemed an early breakfast for some, we were taken in taxicabs to the Lilly Pharmaceutical Laboratories and divided into small groups for the trip through

the plant. What an experience that trip was! It is difficult to express the feeling that one felt upon seeing the manner in which this company carried on their business. Ethical pharmacy on a wholesale scale comes as near the real truth as anything can. Wherever it is possible, straight-line production is used; this with their checking and rechecking illustrates the expression so often heard in class—"Compound every prescription with accuracy, neatness and dispatch." At 12:20 P. M. we were served with a hearty dinner in the Lilly Cafeteria after which the twenty mile bus trip to their Biological farms began. We were told previous to our arrival at the farms that we had never before, and would perhaps never again, see anything so clean and sanitary. This prophecy was fulfilled. The low, Spanish-type buildings which comprise the Biological Laboratories are grouped together about an eighth of a mile back from the main road and surrounded by spacious, well-kept lawns. Every building, the interior of which is entirely finished in spotless white enamel, is equipped and arranged with efficiency as well as absolute sanitation in mind. After our inspection of the Biological farms we were taken by bus to see James Whitcomb Riley's home in Greenfield and then about half way back to Indianapolis for a real old-fashioned country chicken supper (they called it dinner). You know the kind—everything put on the table—help yourself—and when the platter is empty, call for more. After supper, talks outlining the company's policy were given by Mr. Retter, a company official. We then returned to Indianapolis in time to look the town over before leaving on the midnight train for home.

THE OPIUM MENACE

By Geo. Gerlach, '31

About 1000 years ago an Arabian healer, who was seeking new medicinal plants and was experimenting in the virgin field of medicine, accidentally discovered that the juice extracted from the capsules of a species of poppy found in Asia Minor had consistent peculiar effects upon the human body. This substance, called "opos," meaning "little juice," was used strictly for medicinal purposes only and its narcotic properties soon became well known to the ancient Arabian physicians.

The medicinal qualities of opium were known in very early times. It is probable that the production began in Asia Minor and gradually extended to other countries. At any rate, opium was introduced in China by Arabs during the thirteenth century and was first used strictly as a medicine.

The use of opium by smoking and mastication to produce a kind of intoxication followed by long, deep, pleasant slumber and accompanied by happy dreams and visions, had existed in the East for centuries, but it is not thought that opium smoking was extensively practiced by the Chinese until the end of the sixteenth century. By the seventeenth century, the habit of opium smoking had begun to fasten itself upon the people. So rapidly did the custom spread that in 1796 an imperial edict was issued against it.

For over a century, China, bound and helpless in the clutches of the opium habit, made spasmodic but futile attempts to break her chains and free her helpless people from an evil which retarded their physical development, weakened their mental abilities and ruined their economic efficiency. Edicts and severe penalties against the importation, sale and use of opium seemed to have little effect, the drug being consistently smuggled into the country in increasing quantities. The opium came from India and the increase in importation corresponds with the British occupation of India and the monopoly of the East India Company.

In 1800, laws still more severe were passed, so that the sale of the drug was punishable with torture and death. Despite this fact, the importation had steadily increased from 200 chests in 1729, 400 chests in 1790, to 70,000 chests in 1858.

It was not surprising that the Chinese

Government resorted to severe measures for the suppression of the use of opium. In the language of a Chinese writer, "it exhausts the animal spirits; it impairs the business; it wastes the flesh; it dissipates the property; it renders the person ill-favored; it promotes licentiousness; it discloses secrets; it violates the laws; it attacks the vitals; it destroys life." Yet so uncontrollable was the passion among these ignorant coolies, that with full consciousness of their approaching fate, with a full knowledge of the subsequent destruction of health and life itself, they even sold their wives and children to obtain the drug, and committed suicide in despair when their abnormal desire could not be gratified. This evil condition gradually extended over the whole empire, invaded even the imperial palace, and the mandarins and officials who were particularly charged with its suppression were large consumers of it. No surer method could be found to sap the life from a sturdy nation, with the temperament of the Chinese, than the importation of opium.

The English had first engaged in the opium trade with China in 1780, and in the years following, this traffic had increased enormously. Opium was uniformly smuggled in violation of the laws of the Empire. Its conductors were English and Indian merchants, and under their supervision a perfect system of contraband trade was established. In a single year as much as eight million dollars worth of opium was smuggled into the country.

The extent of this trade and its illicit character was known to the British Government. The right and duty of the Chinese Emperor was plain. The Chinese Government had the clear right at once to seize the contraband article and punish the offenders. Many warnings had been made by China, and as England would listen to no appeals or protests, the Emperor of China finally ordered some 20,000 chests of opium stored on ships near Canton to be destroyed. About one-third of this had been supplied by the British East India Company and the British Government, as a result, unjustly demanded indemnity for its smugglers.

This dispute, which occurred in 1839 and was the cause of the First Opium War, resulted in a defeat and loss for China. Fifteen years later came the Second Opium War, which was also won by England. \$24,000,000.00 in indemnity and the com-

plete surrender of ten treaty ports were exacted by England. These ports were "open doors" for trade in general, opium in particular.

Thus with the opium trade forced upon her, China in about 1860, decided to share in the profits which made opium a worth while trade item, and began to grow the poppy herself. This was a turning point in the national life of China. She gave up the struggle to free her people from a degrading habit and relinquished whole provinces to the growth of opium instead of rice, wheat and other necessities of life. Many famines occurred as a result, and a great deal of money was also taken out of the country to pay for the opium which was imported from India. The accompanying official corruption and military weakness of China may undoubtedly be traced to this source.

In 1906, when sixty millions of the Chinese people had become drug addicts, the last great campaign against poppy growing for the total eradication of the opium habit was begun. China conducted the fight with vigor, offenders were severely punished and by 1917 the Empire was practically free from the native grown drug.

The use of opium was also alarmingly prevalent in India some years ago. It was prescribed medicinally for many ailments by the native quacks. It was even given to babies to keep them from crying, and Indian nurses frequently administered it secretly to the children of their European employers. This custom worked very well for the native infants up to the age of two or three years. Later, when the children were old enough to eat solid food, their parents began to break off giving them opium, but when they attempted to stop the opium diet, disease and death very often resulted. In many native villages as many as 25 per cent of all the babies were thus killed by opium.

The opium habit, which was common to all castes, was a tremendous drawback for India. Within a single century, from 1770-1879, India suffered some twenty-one famines, costing twenty-seven millions of lives. These famines might have been entirely or at least very largely eliminated if the hundreds of thousands of acres of India that were devoted to raising opium had been devoted to rice and if the energy destroyed by this same opium had been used for the cul-

tivation of useful crops. Billions of dollars were wasted on opium and this alone tended to keep the nation poor. It is only in recent years that these conditions are being improved, and the opium habit is now apparently on the decline in India.

Persia, like India, having a climate suitable for the growth of the poppy, was also a great opium smoking nation. However, its people were all poor and since transportation to and through Persia was for centuries very inadequate and but little commerce with the outside world was carried on, the curse of opium smoking never reached quite the alarming proportions which were noticed in China and India. Moreover, Persia from the start has always been willing to aid in any attempt to eliminate poppy growing wherever it is possible.

Opium today is still a world menace. The British Government is responsible for the large quantities of opium flooding the world at the present time. The cultivation of the poppy is fostered by the government, manufactured into opium in the government factory at Ghazipur, and into morphine by British firms in London and Edinburgh, and sent out into the world through trade channels, illegal or otherwise. Thousands of pounds of this opium are shipped to the United States every year. A great deal of it is used in medicine and the remainder is used as "dope" to satisfy the opium hunger of our American addicts. That this fatal habit already has a strong grip on our nation is shown by the fact, that although the combined populations of Germany, France and Italy exceed the population of the United States by some thirty million inhabitants, the United States nevertheless imports ten times more crude opium than these three nations together. The distribution of the drug in the United States is supposedly regulated by a law carrying heavy penalties for its violation, but many tons are annually smuggled across the borders to supply the thousands of inveterate "dope fiends" who are found in all our larger American cities.

Even since its discovery centuries ago, the drug opium has influenced the history of mankind. Its power over whole nations has caused numerous disputes and occasional wars, and its deleterious effect upon the energy and ambition of the millions of people who have used it or are using it today has slowed up the progress of civil-

ization. It has changed much of the history of Europe and the Orient, and it is difficult to prophecy how much havoc and destruction it will cause in the future, but it will certainly remain a curse to civilization as long as it is employed in its present role of a habit-forming intoxicant. The only plausible solution to the opium problem lies in the proposal to limit the production of raw materials to the medical and scientific needs of the world. Any such measure to limit the opium crop would cause great economic disarrangement and physical difficulties in Persia, India, China and all other opium producing countries, but in the end, if thoroughly and satisfactorily accomplished, would mean that these great nations, as well as the rest of the world, would profit greatly by the removal of the narcotic which is an important factor in the propagation of crime, insanity and intoxication.

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- Encyclopedia Britannica.
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SUMMER SCHOOLWORK

During the summer session of Western Reserve university, several courses will be offered by the Chemistry Department which may be of interest to students of the Pharmacy School.

For a term of six weeks, starting June 23 and ending August 1, Miss Marion Cleveland, Ph. D., will give an organic chemistry course (5), consisting of lectures, recitations, and laboratory exercises dealing with the occurrence, chemical structure, preparation, properties, and general relationships of the compounds of the aliphatic series of hydrocarbons. Classes will meet daily from 9:00 to 12:00 for laboratory and lecture, and credit will consist of three semester hours.

For three weeks, August 4 to August 22, Mr. Vivian R. Damerell, Ph. D., will follow Chemistry 5 with Chemistry 6, the former being a prerequisite for this course. Chemistry 6 will involve discussion of the carbohydrates, unsaturated compounds, aromatic series, heterocyclic and multinuclear compounds, and dyes, including laboratory preparation of typical representatives of each group. Lectures will be held daily from 8:00 to 9:00 and from 1:00 to 2:00, while laboratory periods will extend from 9:00 to 12:00. Three semester hours of credit are allowed for this course.

These two courses afford a splendid opportunity for any students who wish to complete their organic chemistry requirements during the vacation period. The same topics are discussed as are involved during the regular session, and the credit consists of the same number of semester hours.

Two graduate organic chemistry courses will be given also. Lemuel Charles Raiford, Ph. D., Professor of Organic Chemistry, State University of Iowa, will be in charge, offering Chemistry 21 (Organic Nitrogen Derivatives) and Chemistry 22 (Type Reactions in Organic Chemistry), each course carrying a credit of two semester hours. Chemistry 21 will meet Monday, Tuesday, Wednesday, and Thursday from 12:50 to 2:00, the course being composed of lectures dealing with the structure, methods of synthesis, and types of reactions, of a selected list of the more important organic compounds containing nitrogen. Chemistry 22 will meet on the same days from 4:00 to 5:10, and will concern itself with lectures involving a consideration of types of unsaturation, the negative nature of certain groups of radicals, certain cases of ring formation which will include some instances of molecular rearrangement, orienting influence in the benzene systems, and steric hindrance.

Iodine from Kelp

Trials are being made on the west coast of Scotland with a new harvesting machine which, it is claimed, will make it possible and profitable to revive the old-time industry as a source of iodine, as much as 15 pounds of iodine being sometimes obtainable per ton of Kelp.

The Reserve Pharmacon

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VOL. 4

WESTERN RESERVE SCHOOL OF PHARMACY

No. 3

Cleveland, Ohio

June, 1930

EDITORIALS

PHARMACY AND THE COST OF ILLNESS

Much has been written recently concerning the high cost of illness. Some of the writers have approached the problem from one viewpoint and some from another. Discussions pertaining to general hospitalization, the ascendancy of the specialist and the decadancy of the general practitioner, the expediency of state medicine, etc., have all been covered by both professional and lay writers.

In connection with this matter it is most interesting to note that the Chicago Retail Druggist Association has proposed a plan to the Council of the Chicago Medical Society to bring about a reduction of the high cost of medical care as it relates to pharmacy and also reduce self medication by the public. The proposal includes an educational campaign with talks by physicians, also the presentation to medical groups of the results of studies by pharmacists and an exchange of articles in the bulletins of the two associations.

Here in Cleveland a similar step has been taken. Mr. Joseph Matousek, one of the leading retail pharmacists of the city, acting as the representative of the Northern Ohio Druggists' Association, has submitted the following resolutions to the Cleveland Academy of Medicine:

"Whereas, with the growth of large-scale manufacturing of Pharmaceuticals there has developed intensive exploitation of trade-marked and proprietary rights, and

"Whereas, such exploitation has brought on the market an excessive number of pharmaceutical and biological specialties, has caused needless duplications and variations of U. S. P. and N. F. preparations, excessive detailing of these specialties so priced as to yield handsome royalties and trade-mark profits in addition to the marketing costs, and

"Whereas, such practices are inimical alike to physician, pharmacist and patient, resulting in confusion for the prescriber of medicaments, needless self-medication and in prohibitive cost for the users thereof, now

"Therefore, Be It Resolved by the Northern Ohio Druggists' Association that the members of this and similar associations undertake where they can to point out to their physician patrons and friends some of these futile and vicious practices to the end that pharmacists be enabled to do their part in the very necessary reduction of medical costs."

Of course it is perfectly obvious that this great amount of needless duplication of pharmaceutical and biologic specialties with the confusion and waste resulting therefrom adds enormously to the retailer's carrying charges and higher costs to the purchaser. Cut these carrying charges down and you lower the cost of illness.

The relatively higher cost of prescribing substances by trade-marked names, is effectively shown by the following representative list. The trade-marked name with its approximate percentage of increased cost

appears to the right of each official substance.

Amidopyrine—Pyramidon—33%
 Phenobarbital—Luminal—250%
 Phenobarbital Sodium—Luminal Sodium—250%
 Thymol Iodide—Aristol—260%
 Methenamine—Urotropin—400%
 Barbitol, Soluble—Veronal Sodium—500%
 Barbitol—Veronal—600%
 Theobromine Sodiosalicylate—Diuretin—600%
 Cinchophen—Atophan—700%

It is true in the case of the first substance the percentage increase of cost is not so high but that it may be offset, to a large degree at least, by other considerations which the owner of a trade-marked name through long experience has been able to attach to his article by way of certain subjective values. And such values, of course, are not to be slighted. It would seem, however, that such considerations would seldom, if ever, justify more than a 50 per cent higher cost over bona fide official substances.

OPPORTUNITIES FOR THE GRADUATE

"Most intelligent of the recent efforts on the part of educators to interest young men in pharmacy is a booklet, 'Opportunities for the Graduate,' prepared by the College of Pharmacy of Western Reserve University. The booklet tells the prospect not so much about pharmacy as about what comes after pharmacy. Which is, after all, what counts."

We are happy to quote this comment from the March issue of the *American Druggist*, since we consider it a tribute to the author, the Dean of our School of Pharmacy.

"Opportunities for the Graduate" is addressed primarily to the high school student. Thousands of young people are being graduated from High School about this time of the year, not knowing or even wondering what lies in the future for them. Here is one opportunity. At the same time, the present student in Pharmacy should derive a great deal of benefit from the booklet, for how many of us really have any special fields in view? Again the graduate in Pharmacy will find it well worth reading.

In conclusion we quote from the booklet the opportunities open to a graduate of the four year course:

(1) Wholesale and Manufacturing.

1. He may become a pharmacist,

pharmacognosist, chemist or buyer.

2. He may become a "detail man" for a manufacturing house, calling on physicians.

3. He may become a salesman for a wholesale company.

(2) Retail.

1. He may own and operate a store.

2. He may be employed as a pharmacist in a retail store.

(3) Hospital.

1. He may become a pharmacist in a hospital or a clinic.

2. He may become a buyer.

(4) Government Departments and Institutions.

1. He may become a pharmacist, pharmacognosist, chemist, or drug inspector for city, state and national government and fill these positions in certain institutions.

(5) Journalism and Association Work.

1. The field of pharmaceutical journalism offers opportunities for a writer, trained in the fundamentals of pharmacy.

2. Opportunities are open for young men who can both talk and write, as secretary for one of the many associations in pharmacy.

TO THE GRADUATES

An editorial in the *Northern Ohio Druggist* for June, 1930, issue.

To the forthcoming Graduates in Pharmacy, whether B. Sc. or Ph. C., of the school of Pharmacy of Western Reserve University, our heartiest congratulations and best wishes. The wholly well intentioned impulse to pass on useful advice to the young men and women about to start out on their careers in Pharmacy, is checked for this writer by the realization that precisely in the measure that I would make such advice concrete and particular—therefore practical—the task is beyond me.

In the first place, Pharmacy is a different thing in different places and all the graduates of the W. R. U. Pharmacy School will not locate in Cleveland. Also, Pharmacy as it is known in any metropolitan community is widely divergent in motive and in practice; so much so that the extremes though operating under the common name drug store, or pharmacy have really very

little in common. As regards this community, Greater Cleveland, there is another difficulty.

Traditionally the pharmacists' specific and distinctive function has been to be the compounder and purveyor of medicaments. Aside from the fact that the activities of the pharmaceutical manufacturers have in increasing measure made of the druggist merely the distributor of proprietary pharmaceuticals is the further circumstance that medical science and medical organization in teaching, in hospital practice and in health administration is making tremendous strides in disease prevention.

Cleveland; Healthiest City

Cleveland is outstanding in that direction. It is, to this writer's knowledge, the healthiest large city in the nation. That is a social gain of the first importance and a distinct civic asset but it is bound to affect adversely the practice of curative medicine and hence the practice of pharmacy proper, namely, the dispensing of medicines.

All of which, while true, does not mean that the drug business is to be despaired of and passed up by the young men equipped for it by training and experience, who understand what is going on about them and have the ability to adapt themselves to conditions as they find them.

Changing? What of it?

Professor Arny in a talk here a few months ago said that he did not remember a time when there was not complaint of change in the drug business; and in every branch of it. For this community, this writer can testify to the same experience over a period of thirty years, yet I could name thirty Cleveland druggists who in that period of time, starting from scratch, became well to do or even wealthy.

Instead of individual do's and don'ts I should like to set down for what they may be worth the following general observations and reflections.

Thoughts for the Graduate

Young people entering business should distinguish clearly between the professional and the commercial idea. The professional idea is to supply existing wants competently and economically and does not concern itself with multiplying wants. Commercial technique consists not only in stimulating

to the utmost existing desires but in constantly creating new ones.

In the drug business of late years the commercial method has been overdone. Too many dealers have been unwisely persuaded to glorify "merchandising." This, as I see it, consists mainly either in tricking people into buying what they do not want at all or else selling them what they do want greatly in excess of their needs.

One of the essentials of success in the retail drug business is to steer one's course persistently and sensibly by the professional instead of the commercial ideal.

Another, in addition to keeping one's health and good humor, is to have such pride of craft and love for pharmaceutical manipulation that one will do as much of it as circumstances permit, just for the fun of it.

The best balanced, the most satisfying and the most enduring successes that will be made in Pharmacy in the next few decades I confidently predict, however, will be made by the young men who have somehow perceived the new and enlarged function of true Pharmacy in our day and who have resolved to meet its demands and its challenge. And what is that?

The Bigger Job

The unique, the indispensable and most important function of the pharmacist during your life time, my young friends, will be as contact man between physician and layman. In that capacity two obligations devolve upon you. To be equipped to advise the physician how to simplify his prescribing so that he may get his therapeutic effects increasingly through non-trade marked remedies at less cost to his patients; and secondly, to do what you can to direct people away from quackery, whether licensed or not, towards rational and not too expensive solutions of their health problems. You must equip yourselves, in other words, to help reduce the cost of real medical needs and to do what you can to minimize bunk and ignorance in so far as they affect health problems. That, as I see it, is the challenge of the day to your resourcefulness and to your courage.

For that enterprise neither large financial resources nor any special location is required. It lends itself quite as well, perhaps somewhat better, to small scale operation than to large; because large scale operation

involves big overhead which more often than not necessitates high pressure merchandising. It does require pride in Pharmacy, unswerving adherence to its best practices, love for and practice of its technical processes, willingness to learn, a steadfast and enthusiastic belief in the worthwhileness of the vocation apart from monetary considerations, and with it all and beyond all, good humor and tact. For the young pharmacists who will steadfastly contribute such diligence and talents it is safe to predict not only substantial material success, but the esteem of the community in which they live, and in due time the deep satisfaction of knowing that they have creditably participated in and contributed to one of the oldest and most useful of vocations.

C. W.

FRATERNALISM AND PHARMACY

By H. F. Valway, '31

Should there be more than one fraternal organization in pharmacy schools? This is a moot question often discussed by fraternity men and others who are interested in fraternity affairs. I believe there are a few arguments, both pro and con, which may be properly set forth in these columns.

School politics (everyone knows that there are politics even in our student bodies) would be short-lived and thus do away with the competitive spirit which now exists between members of the different organizations. By eliminating the competition, part of the training of every young man is neglected and this training is every bit as essential as his professional training. How, may I ask, is he to learn to take defeat with a smile and success with the same size hat if he never experiences these sensations before he gets out in the business world? On the other hand, let me relate an experience I had a few months ago which shows what may result from fraternal rivalry in any professional school. I happened to be in the office of, let us say, John Jones of Ki Fraternity, when Bill Smith of Pi Fraternity and salesman for a large pharmaceutical house, walked in. Evidently Bill, who incidently had not attended the same school as John, had his dates twisted and thought John was a brother of Pi Fraternity. Bill started in with his usual line of sales talk interspersed with fraternity chatter which included some

pretty hot digs at Ki Fraternity. After talking for about a quarter of an hour, Bill left without an order. As soon as the door closed John turned to me and said, "Did that blankety blank sap think I would give HIM my order? Why do you know that when I was in school those guys from Pi thought they and nobody else had any license to take part in our school affairs." There you are! Two men from different schools who had never seen each other before and who knew nothing of the feeling which existed today between the fraternities in their respective schools, but because of antagonism for rival fraternities, bred in them while in school, actually despised each other. Is that spirit going to promote our profession?

At a recent meeting of the state chapters of a certain professional fraternity, held for the purpose of ironing out the difficulties of the individual chapters, this same question of fraternal rivalry came up and met with considerable discussion. Of all the chapters represented, only two were in a position to actually understand the situation; the other chapters being the only representatives of a professional fraternity in their respective schools. Of the two chapters most concerned, one claimed that they always looked to the rival (?) fraternity when they needed support in any affair outside of their own fraternal business and in every instance received the support needed. Naturally, at pledging time they were out to get every man they considered worth pledging and the other fraternity did the same, but neither group felt any real animosity if the other crowd succeeded in landing the man they were after. Another problem that was discussed to some length was the idea of fraternities awarding scholarships, as is done in some schools, to deserving students. If fraternities in different schools could get together and give one man belonging to some fraternity and picked by the faculty of their school, or by a committee composed of members from the two (or more) fraternities, his tuition or part of his tuition for the following year, it would not only increase the number of good men anxious to join fraternities but also promote competition among the men already in the fraternities, and thus in turn better our profession. That, when you come right down to it, is the big thing behind fraternities.

If pharmacy school fraternities will take steps to do away with the bad feelings that now exists in practically every school where there are two pharmaceutical fraternities and try to promote the spirit of friendly rivalry, I believe there is room for more than one fraternal organization in the large majority of schools, but if we cannot work together for the betterment of our profession let us have one big pharmaceutical fraternity.

SELECTION OF PROPRIETARY VERSUS NONPROPRIETARY DRUGS IN HOSPITAL PHARMACY

(Continued from page 3)

sometimes directly to the public. If it is found desirable for the sake of convenience to furnish a combination of two drugs in fixed proportions, then the name should give full information as to the ingredients and the dosage of each.

Hospitals have contributed much to advances in therapy by furnishing controlled conditions under which new remedies can be studied and methods of their use improved. The methods of use of insulin and of liver extracts for pernicious anemia were thus developed much more rapidly and safely than could have been the case without the cooperation of hospitals. New and worthy drugs whose composition, action and safety have been determined are given further study in hospitals, where their action and limitations can be easily observed, with the results that new and proved remedies are made available to the public.

It sometimes happens, however, that new drugs are offered to physicians and hospitals supposedly for clinical tests, while the real object is to popularize a partly tried drug, or an old drug under a new name. This is not an experimental test of the drug by the physician but an experiment of the manufacturer to see how long it will take the physician to acquire the habit of prescribing it.

In many hospital pharmacies there will be found a drawer in which are collected odds and ends for which there is no longer an active demand but which the thrifty pharmacist hesitates to discard. Here in this pharmaceutic morgue repose the remains of formerly prosperous proprietaries,

whose vogue ceased with the termination of advertising. Some survived longer than others, but they either have been found to be useless or have been replaced by pharmacopeial preparations of known composition.

Hospitals have an educational responsibility to their interns and to the public. If members of the hospital staff prescribe proprietary drugs when pharmacopeial drugs are available, their interns are likely also to acquire the habit of prescribing proprietaries. Example is a great teacher, and interns soon come not only to take histories and examine patients but also even to walk and talk and prescribe like their chiefs. Patients who are given proprietaries in the hospital soon learn to use them on their own initiative, and the unfortunate outcomes of self-medication result.

A certain responsibility for proper prescribing lies with the intern himself. While he is still technically a student, he is a mature man of an average age of 27 years and has received his instruction in a good medical school. He must accept some responsibility for the proper treatment of the patients in his charge, and to the extent that he hopes later to rise in his profession he should learn to think for himself and prescribe those remedies whose composition and action he knows.

Superintendents and boards of trustees of hospitals will find much to interest them in the invoices and inventories of the drug room. In those hospitals in which all drugs are supplied gratis, considerable sums may be saved to the hospital, and where the cost of drugs is added to the hospital bill a material saving in the cost to the patient of hospital care may be made by seeing to it that widely advertised and often expensive proprietaries are not allowed to displace equally effective and often identical official products.

Hospital Manuals

Hospitals must have rules of procedure for the guidance of interns, and in many instances these are printed in a small manual to which are sometimes added brief formularies including, in addition to standard drugs and their doses, certain formulas that have been traditionally used in the hospital.

Some hospital handbooks are excellent and are extremely valuable to interns in

aiding them to form good habits of prescribing, as well as in providing information in emergencies. Others of these manuals are likely to exert a pernicious influence, as in the case of one which includes in its formulary a number of proprietary mixtures and appears to have been written by the detail man rather than by the well informed staff of the hospital. A reading of this particular handbook leads one to doubt whether it has ever been submitted to the staff for approval.

Several manuals on therapeutic subjects are published by the American Medical Association under the direction of the Council on Pharmacy and Chemistry, and include New and Nonofficial Remedies, Useful Drugs, and an Epitome of the Pharmacopeia, as well as an annual report in which are summarized the proceedings of the Council in its investigations of drugs and remedies promoted under false and unwarranted claims.

The publication of a hospital manual with standard hospital rules and formulary, suitably interleaved for the insertion of special rules and formulas desired by each individual hospital, offers one way in which all interns may be furnished at small cost with helpful authoritative information approved by the hospital staff.

Cooperation with Hospital Pharmacist

Inspection and study of the hospital drug room will be of interest and profit alike to the administrative and the professional members of the hospital staff. The superintendent will find here opportunities for justifiable economies the existence of which he had not suspected. Attending physicians will be surprised at the large amounts of proprietary drugs which they are unthinkingly using in place of equally effective and less expensive pharmacopeial preparations, often under the misapprehension that the widely advertised proprietaries were accomplishing something more than the practically identical official drugs.

A closer acquaintance and cooperation between the hospital pharmacist and the members of the attending staff will be of mutual profit. The pharmacist will learn the problems which the staff has to meet, and the physicians can learn much concerning the composition and origin of new as well as of old remedies. In many hospitals the staff has failed to avail itself of the store of

pharmaceutic information which may be had from the pharmacist for the asking, and the pharmacist has not taken as large a place in hospital conferences as he should. His function should not cease with the supplying of drugs called for on prescription and the detecting of inadvertent errors of dosage, but properly should be extended in an informative and advisory capacity, under instruction given by the staff and medical superintendent, so that hospital prescribing may be limited to remedies whose composition is known and whose use is approved by the best medical practice.

The correction of habits of prescribing proprietary drugs in hospitals will go far toward eliminating confusion and improving the medical education of interns, nurses, the public and the attending physicians themselves.

A TRIBUTE

Dean of W. R. U. Pharmacy school is he.
Ever lighting the way for the studes, you see.
At all times we're sure he can't be beat,
Now, all of his classes are one big treat.

Sunshine he ever spills along the way,
Pretending to be carefree the whole long day.
Ever interested in us, one and all,
And ever watchful, lest we should fall.
Sincere, truthful, full of vigor and vim—
Earnestly we hope we'll always have him.

V. V. Portner, '32

Insulin is given to diabetic patients for the purpose of reducing the dangerous concentration of sugar in the blood; yet the first effect of an insulin injection is to increase the amount rather than decrease it. This medical paradox was explained to the members of the Thirteenth International Physiological Congress held recently at Boston, by Prof. Max Buerger of the University of Kiel, Berlin.

The increase in sugar is not due to the piling up of glucose, the most abundant of the carbohydrates in the blood, but comes from the release of glycogen, the so-called "animal sugar," which is stored in the liver. Prof. Buerger demonstrated both by clinical observation and by various laboratory experiments that one of the initial effects of the injection of insulin is the release of a part of this stored carbohydrate reserve.

Science Service.

HOW MEN HAVE FELT ABOUT WOMEN

By Adelaide Evans Harris, A. M.

Instructor in English

In this issue of the *Pharmacoon* there will be no attempt to exhaust a subject which has occupied the minds of men since the beginning of time. The woman question is the oldest subject in the world—and the newest. The earliest papyrus extant records in hieroglyphics a tale of feminine wiles; the latest edition of the *News* or the *Press* has another. In between there has been an unceasing stream of writings, chiefly censorious, by men upon woman, and very few—before the nineteenth century the woman writer was a rarity—by women upon men. The subject, one must admit at the outset, is too vast to be covered by anything short of a special encyclopedia, but perhaps this one small point may be made: Is not the view of women inherited from the past, although it has helped shape the sentiments of men today, a one-sided and prejudiced view? It's at least an interesting point to consider.

From the beginning man's imagination has given to woman two shapes; that of angel and of devil, of saint and siren. In the Middle Ages especially she was worshipped on a pedestal or trampled in the mud, and scarcely given a resting place at any intermediate point. In the records of the past, however, the writings which attack and abuse the feminine sex bulk far larger than those which praise it, and they often are, though they were not always supposed to be, more entertaining. The audiences at the medieval miracle plays were always properly respectful to the angels with the white robes and golden crowns, but they preferred the devils who ran among them with their pitchforks on a common footing. In this respect, as in others, we have changed little from our ancestors.

For the earliest tales of feminine duplicity we turn to the Orient, and find in such collections as the *Panchatantra*, the *Seven Sages*, and the *Arabian Nights* matter which heralds Boccaccio and all his followers. Most important of all sources, however, and one which cannot be neglected by one who would understand the position of women is that book which introduced the mother of mankind. In the story of Eve in the Garden

of Eden, a story which was accepted literally for so many centuries, is to be found the source of the two most deeply-rooted and widely-disseminated beliefs men have held about women—the first, of their inferiority; the second, of their natural depravity. Those who feel there is good reason for retaining both these theories should know at least their history.

The first belief has as its basis the second chapter of *Genesis*, in which it is set forth that Eve was created from a rib of Adam while he slept. Here, according to the Church Fathers, was divine sanction for the inferiority of Eve and all her daughters. "But I suffer not a woman to teach, nor to usurp authority over the man, but to be in silence. For Adam was first formed, then Eve," wrote the Apostle to the Gentiles, and again: "But I would have you know, that . . . the head of the woman is the man . . . For the man is not of the woman; but the woman of the man." All the Fathers agreed that the wife must be in subjection to her husband, since the Lord had told Eve that Adam should rule over her. They even debated the question, though more rarely, of whether the first woman had a soul, since nothing specific had been said about it.

Rabbinical comment on the subject is too picturesque to be ignored, although it had little influence upon the development of Western thought. Here is one explanation the Rabbis gave for the creation of woman:

When Eve was created from the rib of Adam she was drawn not through his head, lest she be proud; nor through his eyes, lest they be wanton; nor through his mouth, lest she be given to gossiping; nor through his ears, lest she be an eavesdropper; nor through his hands, lest she be a kleptomaniac; nor through his heart, lest she be jealous; but she was taken from the most chaste and secluded part of his body, that she should be modest and stay at home; yet in spite of these precautions, woman is all the things especially guarded against.

The story of the creation of Eve from the rib of Adam is responsible to a marked extent for the belief in the inferiority of woman; the story of her tasting the forbidden fruit and giving it to her husband accounts in the same measure for her reputation as the author of sin and the cause of all the evils in the world. It is this latter conception which was used continuously as a lash and check for all Eve's daughters.

"For Adam was not deceived"; decreed St. Paul, "but the woman being deceived was in the transgression." The learned doctors of the Church never doubted this point. It is made perfectly clear in this quotation from a sermon of Tertullian, a powerful and influential preacher of the third century. He is addressing the women in this congregation:

And do you know that you are each one an Eve? The sentence of God on this sex of yours lies in this age; the guilt must of necessity live in it. You are the devil's gateway, you are the unsealer of the forbidden tree, you are the first deserter of the divine law, you are she who first persuaded him whom the devil was not valiant enough to attack.

No question was ever raised of the magnitude of Eve's sin, nor of its fatal consequences; and the only excuse ever made for her, and that rarely, was that she had sinned through ignorance, or, as one erudite doctor put it, "through feminine incapacity."

When the story was treated as an allegory the woman fared even worse. In the allegory the serpent is the symbol of pleasure, Eve of the senses, Adam of the spirit or mind—pleasure stirs the senses, the senses distracts the mind, which yields in turn. Adam, according to this ingenious explanation, fell through permitting his higher nature to be swayed by his lower, in other words through listening to his wife. Here was a second, still more potent reason, why a wife should be in subjection to her husband. It meant that all the husbands of Eve's daughters could point to the fate of the first man as a horrible warning, as did Adam in the miracle play:

Nowe god late never man after me
Triste woman tale.

Important as is the Bible in determining the position of women, one who investigates the subject fully must go even further back into the history of human relationships. The roots of misogyny lie coiled about all manner of dark fears and superstitions concerning sex and are close linked with economic conditions; but in theory, at least, they are based upon man's age-old sense of his superiority. The account in *Genesis* which makes woman responsible for the loss of the earthly paradise is only one, though by far the best known and most influential, of several stories which make her the author of evil. In Greek mythology, for example, it is Pan-

dora, the first woman, who in defiance of the gods' commands opened the box which set free all the ills and pests of the world.

Throughout the unfolding story of mankind one can follow the thread of these beliefs in the inferiority and natural sinfulness of the feminine sex. They have always been strongest in Oriental countries and in Southern Europe. Solomon, so it was said, asserted in *Ecclesiastes* that it was difficult to discover a good man, but impossible to discover a good woman. In Greece the greatest philosophers had little respect for the other sex. Socrates, who in this as in other things was far in advance of his age, did urge the young husband to take his wife into his confidence if he expected her to order his house wisely; but Plato more nearly expressed the spirit of his time when he wrote: "A woman's virtue may be summed up in a few words—she has only to manage the house well and to obey her husband." Aristotle, the "master of those who know," believed that the relation of man to woman was that of governor to subject; and the didactic poet Hesiod referred to a wicked wife as one who tried to sit at meals with her husband.

With the establishment of Christianity the position of the woman, particularly of the married woman, was both raised and lowered. It is necessary to recognize this violent contradiction in the attitude of the Church in order to view the matter fairly. The status of the wife was given dignity through making it permanent, (in Greek and Roman society divorce had been merely a matter of expressing a desire to separate and a division of property) but it was often made unbearable through the practically unlimited authority conferred upon the husband. A man was not permitted to desert his wife, but he could make her daily existence as miserable as he pleased. Moreover, although marriage was made a sacrament eternally binding, it was considered a stumbling block on the true road to salvation, since in the monastic system celibacy was preached as an essential virtue.

Woman as temptation incarnate figures in the great mass of writings which were produced by clerics from the first Christian eras down at least to the end of the Middle Ages:

For trusteth wel, it is an impossible
That any clerk wol speke good of wyves,
But if it be of holy seintes lyves,

For the complaint of Chaucer's Wife of Bath there need be no lack of illustrations. "The base fiend," writes one cleric, "has laid many dangerous traps for men, but the worst of the snares which no man can escape is the woman. She is the source and origin of all evil, together of scandals, dissension, strife, and revolt—there is nothing wicked in the world in which she has not had a share." "A light sex, passionate and covetous, and concerned only with vanities and worldly pleasure, full of deceit and guile," asserts another, and a third compares a woman to a monster which has the head of a lion, the tail of a serpent, and within a glowing fire. With this monster man cannot hope to struggle; his only escape is in flight.

Particularly virulent are the diatribes against marriage. Walter Map, the author of one notorious document, told how he was providentially rescued from so dire a fate by the arrival of three angels. One angel told him of a Roman citizen who disclosed the fact that his three wives one after another had hanged themselves from a pear tree in his garden, and immediately all the married men in the neighborhood came begging for a graft of that same tree. "A man goes to marriage," concludes this clerical author, "as an ox to the slaughter; death alone can relieve him."

Material of this nature seems—at least one hopes that it does—too warped and embittered to be taken seriously, though it has to be reckoned with in tracing the history of misogyny. For an understanding of how the average men of the Middle Ages felt about women we can turn to another body of didactic writings. These are the books of conduct, written in great numbers by husbands for their wives and fathers for their daughters, which set forth rigidly and, one must imagine, optimistically the standards of feminine conduct. If you think the idea of the inferiority of women has been over stressed, you should read these quotations, drawn at random, from actual instructions for living women:

It is not necessary to love your husband as an equal, but as a superior with respect and absolute obedience. . . If your husband is angry and beats you, you must always be humble and submissive; you may try to overcome his anger with gentleness, but if you do not succeed and he is brutal, weep in your own room, but do not complain.

Birds and beasts love their masters, even dogs who are beaten and stoned, so ought women to love their husbands. . . God has commanded that a woman be always obedient; when young she ought to obey her parents and masters, later her husband.

An obedience that was un murmuring and unquestioning was, it may be seen, the cardinal virtue in a woman. The model wife of the Middle Ages, one whose story was told by Petrarch and Chaucer, as well as by lesser writers, was Patient Griselda. Griselda never questioned her lord's commands. She gave up her infants without a murmur, though she thought they were to be put to death; she cheerfully agreed to act as serving-maid for the bride she believed was supplanting her. Even the medieval writers agreed that here was a paragon among women. Wives who asserted their own wills, however, had to expect the consequences. In one book of conduct the Knight de La Tour Landry tells with obvious approval of a wife whose husband struck her and broke her nose because she presumed to answer him before people.

The same moralist tells of three merchants who laid a wager on whose wife was the most obedient—apparently laying wagers on one's wife was a favorite diversion of the medieval husband; it is used in the *Taming of the Shrew*. These merchants agreed to visit the house of each in turn. At the first house the husband told his wife to leap into a basin, but she asked, "Why?" so he struck her with his fist. The second wife refused, and was beaten with a staff. At the third house, the merchants, somewhat wearied by their travels and exertions, proposed that they eat before putting the test. When they had sat down the husband cried to his wife, "Sele sus table!" meaning, salt on the table; but she, thinking that he had said, "Seyle sus table," which means, jump on the table, at once, with a tremendous clatter of dishes, leaped to the center of the board. Her husband won the wager without further test.

The salvation of her soul and the comfort of her husband were the only goals for which the good wife needed to strive. From the many writings devoted to the subject it is easy to select enough points to fill the married man of today with envy. The good wife—if she followed the advice so lavishly given her—always put the pleasure of her husband above her own. She studied his

tastes and never let him know if her own did not agree. She was sad when he was sad, gay when he was gay, and she shunned everything that could annoy him. If her husband was absent, she dressed simply and modestly, and refrained from eating any toothsome morsels, lest it might seem she could be happy without him. She never admitted anyone to the house without the permission of her husband; indeed if he were away she might close the house entirely. Above all she was concerned for his physical well-being. When he came in weary from his travels, she warmed him by the fire, washed his feet, and helped him disrobe. And if he was ill she showed keen anxiety; but if she had any ailment she pretended to be well or told the truth only to her physician.

The normal woman of the Middle Ages was not, it is safe to assume, either the monster of perfidy and guile depicted by the satirist, or the Patient Griselda so devoutly hoped for by the moralist. Often she must have been crushed by the weight of authority brought to bear upon her, but often too she made her protests known. The brow-beaten, hen-pecked husband is not a modern phenomenon. The "fight for the breeches," so far as the actual title is concerned, can be traced as far back as the thirteenth century when, according to an Old French fabliau, a pair of trousers was placed in the center of the floor as a reward for the victor. Thomas Wright, a medieval scholar, asserts that in Germany at this time the struggle between husband and wife for the "mastery" could be an actual legalized contest, with regulations and penalties carefully laid down. On the outcome depended who should be the permanent ruler of that particular household. The many plays and poems on the "taming of the shrew" indicate the vitality of the subject. And the shrew was by no means always tamed. The best comedy scene in the Chester miracle cycle is that of the Deluge in which Mrs. Noah refuses to come on the Ark, and proceeds to beat her husband when she is finally dragged there.

Whether the woman was an actual shrew or not, the evidence—masculine to be sure—indicates that she did not always suffer in silence. Few of our present-day jests have a more impressive lineage than those concerned with the activity of woman's

tongue. Woman's tongue indeed—if we are to believe the Knight de La Tour Landry—was responsible for the loss of Paradise, since if Eve had not chattered to the serpent in the absence of her husband she would not have been tempted. "Be like Our Lady," the Knight warns his daughters, "and not like the cackling Eve."

One favorite anecdote of feminine garrulity is to be found first in Medieval Latin. It relates how Tutvillius, a devil of Hell, hid behind a pillar of the church while he attempted to record the conversation of three women who were gossiping during the sermon. His pencil flew rapidly over the tablet, but not as rapidly as the tongues of the women, until in desperation he beat his head against the pillar and retired defeated. The truth of the story was attested by the marks of blood found on the pillar the next morning. Tales of devils routed by women are legion. In one of the interludes of the early sixteenth century dramatist, John Heywood, is the episode of the Pardoner who went to Beelzebub to ask for the soul of a woman, and was told he might have it and welcome, since she had been driving the devils mad by her chattering, if in the future he would pardon ten women for every one man.

Another tale of the kind is the well-known one of the Dumb Wife of Aberdour. In this the husband requests the devil to enable his wife to talk and is told to place an aspen leaf under her tongue. Wishing to insure the success of the remedy, he places three leaves, whereupon his wife talks so incessantly that he hurries to the devil with the request for something to make her stop. This is the reply:

The least devil in hell
Can give a wife her tongue;
The greatest, I you tell,
Can never make her dumb.

In a curious fifteenth-century rhyme, loquacity is made the climax of feminine sins. Ther wer 3 wily, 3 wily ther were
A fox, a fire, and a woman
Ther wer 3 angry, 3 angry ther were
A wasp, a wesyl, & a woman
Ther wer 3 cheteryng, 3 cheteryng ther were
A pie, a jaye, & a woman.

In Medieval Latin again is an anecdote, a modified version of which is still known in our day. A husband and wife were walking through a field which had been re-

cently cut. "How smoothly the sickle has cut the grain!" exclaimed the man. "It was not a sickle," protested the woman; "the grain was cut with shears." "Sickle!" insisted the husband; "Shears!" cried the wife; whereupon he threw her upon the ground, sat upon her, and held her tongue. "Now which was it, wife?" With difficulty the woman managed to form the word, shears. The husband, angered beyond endurance, produced his knife and cut out her tongue, while she, wounded but undefeated, raised her hand, and with her fingers made the motion of a pair of shears.

The moral of this tale is, without doubt, that a woman not only insists upon the last word in an argument, but is also incurably stubborn. So firm has been man's belief in her natural perversity that it is easy to give examples. Here is one from *Mery Tales and Quicke Answers*, set down as Shakespeare may have read it:

A man there was whose wyfe, as she came over a bridle, fell in to the ryver and was drowned; wherefore he went and sought for her upward against the streame, wherat his neighbors, that wente with hym, marvalyed, and sayde he dyd nought, he shulde go seke her downeward with the streame. Naye, quod he, I am sure I shall never fynde her that waye: for she was so waywarde and so contrary to every thyng, while she lyvedde, that I knowe very well now she is deed, she wyll go agaynste the streame.

This has been (it should be mentioned again for the sake of the final impression) a one-sided account. Noble women are enshrined in the Bible; the beautiful and virtuous lady has always been the subject of the poet's song: but that is another story and one that has been often told. The fact remains that throughout the ages more has been written in dispraise of women than in praise, and the echoes are still to be heard. Six hundred years ago Chaucer recognized the injustice of the situation, and permitted his Wife of Bath to tell how different would have been the result, had the tables been turned and women instead of men been the writers. It's a suggestion worth pondering over.

By God, if wommen hadde writen stories,
As clerkes han with-inne her oratories
They wolde han writen of men more wikkednesse
Than all the mark of Adam may redresse.

A NEW SPORT IN PHARMACY SCHOOL

Bowling has proved to be one of the most popular of the sports in the School of Pharmacy this year; in fact so popular has it been that a League composed of ten teams was organized. Each week for nine weeks each team of four men (and one girl's team) played two games. The Student Council awarded prizes to the following for high individual scores:

- Stockhausaverage score 180
- Karneraverage score 178
- Celke and Farriseach 172

The three teams to receive prizes were the Oleum-She Team, the Super-Sophs and the Faculty Team.

Users of frozen carbon dioxide, or "dry ice" should be very careful in handling this product as serious effects may be had by carelessness. A number of claims have been filed with the Ohio Industrial Commission for injuries while using this product.

The "dry ice," which is used in ice cream and dairy plants, has a temperature of about 110 degrees below zero, or 140 degrees below the temperature of ordinary ice. It may produce considerable damage to the person using it with bare hands. Numbness and pain, not only in the fingers but also in the hands and arms, are the first symptoms, and in most cases a form of neuritis is produced.

The Council of Pharmacy and Chemistry of the American Medical Association officially approved the name of **Viosterol** for preparations of irradiated ergosterol, the powerful substance that will prevent or cure rickets. Preparations of this substance sold under any other name have not been accepted by the Council as meeting its standards.

Science Service.

Very Low

Friend (Visiting hospital patient)—"Do you know, old man, that's a swell looking nurse you've got?"

Patient—"I hadn't noticed."

Friend—"Good Lord—I had no idea you were so sick."—*Selected.*





Official Title: Lucille Gordon Bickford

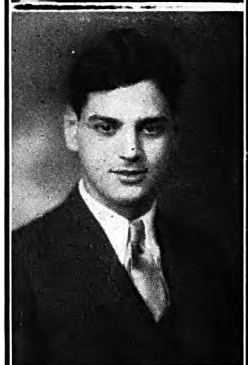
Common Name: "Bickie"

Description. Habitat: Bucyrus, Ohio

Physical Properties: Further evidence that a woman's place is not necessarily at home. Bickie has capably handled many important positions in this school of men.

Assay: B. S.

Tests for Identity: Kappa Epsilon; Class President 4; Secretary Student Council 4; Circulation Manager Pharmacon 3; Editor 4.



Official Title: Ernest T. Gross

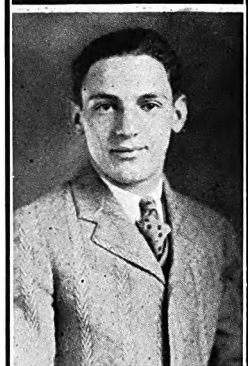
Common Name: Gross

Description. Habitat: Cleveland, Ohio

Physical Properties: "Gross" in the language of Germany is the word for "big". And Gross is big in his sterling qualities.

Assay: B. S.

Tests for Identity: Alpha Zeta Omega; Class Secretary 3, Student Council 4.



Official Title: Myer Lewis Karner

Common Name: Myer

Description. Habitat: Cleveland, Ohio

Physical Properties: We wonder if Myer has any aspirations for the White House. For he surely is one who gets just what he sets out for.

Assay: B. S.

Tests for Identity: Student Council 3, 4; President 3; Class President 3; Basketball 2, 3, 4; Baseball 3, 4; Pharmacon Reporter 2, 3, 4.



Official Title: Alvin Henry Kuttler

Common Name: "Kutty"

Description. Habitat: Cleveland, Ohio

Physical Properties: Careful in word and in appearance Kuttler represents the new mode—the quiet, neat and careful pharmacist.

Assay: B. S.

Tests for Identity: Phi Delta Chi; Class Secretary 4.



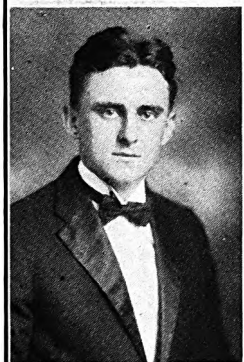
Official Title: Wanda Jeannette Baygrowitz
Common Name: "Wanda"

Description. Habitat: Cleveland, Ohio

Physical Properties: Wanda is serious in her studies and most pleasant in her friendships, though she is easy to look at.

Assay: Ph. C.

Tests for Identity: Kappa Epsilon



Official Title: Henry A. Breck

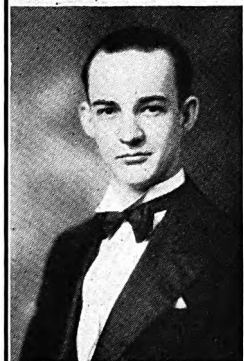
Common Name: "Heinie"

Description. Habitat: Cleveland, Ohio

Physical Properties: The most "cutting" remark possible to Heinie is his great love for manufacturing pharmacy.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi; Class President 2; Student Council 2, 3.



Official Title: George Louis Bruehler

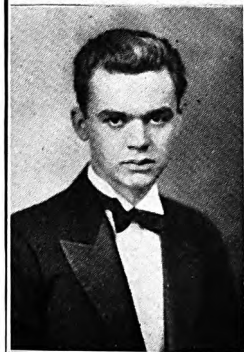
Common Name: "Georgette"

Description. Habitat: Cleveland, Ohio

Physical Properties: George is clever in his sketching, but he can't be a genius, for geni are seldom extraordinarily cheerful and likable.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi; Art Editor Pharmacon 3.



Official Title: Edgar William Cantlon

Common Name: "Ed"

Description. Habitat: Cleveland, Ohio

Physical Properties: Cantlon's earnestness in acquiring knowledge demands admiration and none of us are slow in giving him just that.

Assay: Ph. C.

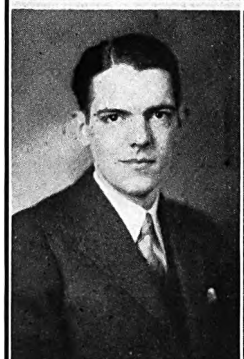
Tests for Identity: Phi Delta Chi



Official Title: Maurice Harding Cole
 Common Name: Cole
 Description. Habitat: Cleveland, Ohio
 Physical Properties: Pharmacy needs more men like Cole, men who excel in literary accomplishments.
 Assay: Ph. C.
 Tests for Identity: Class Vice-president 2; Student Council 4. *Reserve Weekly*.



Official Title: Earl T. Cook
 Common Name: "Cookie"
 Description. Habitat: Canton, Ohio
 Physical Properties: Earl is his name, not his title, although his bearing and manner are those of the gentleman.
 Assay: Ph. C.
 Tests for Identity: Phi Delta Chi



Official Title: Ralph Cullinan
 Common Name: "Ralph"
 Description. Habitat: Warren, Ohio
 Physical Properties: It is a wonder that Ralph still has a shirt on his back, for his generosity to his friends is unlimited.
 Assay: Ph. C.
 Tests for Identity: Kappa Psi



Official Title: Joseph Dworkin
 Common Name: Joe
 Description. Habitat: Cleveland, Ohio
 Physical Properties: When good fellowship was being given away, Joe must have been standing first in line. Do you suppose scholarly excellence was distributed at the same place?
 Assay: Ph. C.
 Tests for Identity: Alpha Zeta Omega



Official Title: Henry W. H. Gallagher

Common Name: "Heinie"

Description. Habitat: Cleveland, Ohio

Physical Properties: That saying that "nobody loves a—" is all wrong. For who is better liked in Pharmacy School than "Heinie"?

Assay: Ph. C.

Tests for Identity: Phi Delta Chi



Official Title: Abe Harris

Common Name: Abe

Description. Habitat: Cleveland, Ohio

Physical Properties: Beginning with Lincoln, history relates of great men whose first name was Abe. Watch for the next history textbook published.

Assay: Ph. C.

Tests for Identity: Alpha Zeta Omega



Official Title: John Benedict Kalasinski

Common Name: "Kal"

Description. Habitat: Cleveland, Ohio

Physical Properties: Caruso's worries were over when he left this world. So Kal may go on singing without causing worry to the other great vocalist.

Assay: Ph. C.



Official Title: Ruth Lucille Kotershall

Common Name: "Ruthie"

Description. Habitat: Cleveland, Ohio

Physical Properties: Ruthie doesn't mean to be a troublemaker. It's not her fault if half a dozen fellows congregate about her in lab and raise too much disturbance.

Assay: Ph. C.

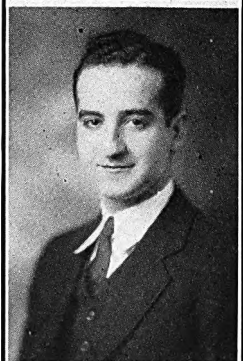
Tests for Identity: Kappa Epsilon; Class Secretary 1, Pharmacon Reporter 3.



Official Title: Casmer Walter Miskiewicz
 Common Name: "Miskie"
 Description. Habitat: Cleveland, Ohio
 Physical Properties: Miskie is inquisitive.
 Not only that but he's wise to realize that
 upon it depends the success of education.
 Assay: Ph. C.
 Tests for Identity: Basketball 2, 3.



Official Title: Lottie Montowski
 Common Name: "Montie"
 Description. Habitat: Cleveland, Ohio
 Physical Properties: Lottie pretends that
 she is awfully mad when the boys kid her,
 but we all know that she really likes it.
 Assay: Ph. C.



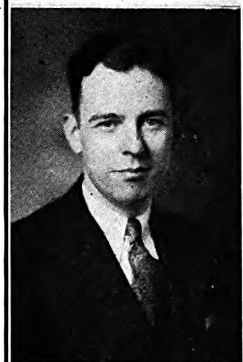
Official Title: Peter A. Nesi
 Common Name: "Pete"
 Description. Habitat: Cleveland Heights,
 Ohio
 Physical Properties: When we wanted a
 good orchestra we turned to Pete. What
 are we going to do now?
 Assay: Ph. C.



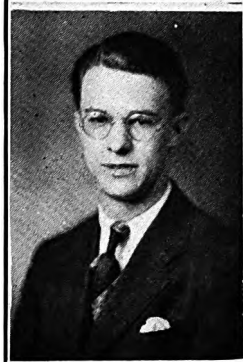
Official Title: Brooke K. Phillips
 Common Name: "Brookie"
 Description. Habitat: Salem, Ohio
 Physical Properties: If we could only get
 goodlooking Brookie to look at a girl,
 everything would be completed success-
 fully.
 Assay: Ph. C.
 Tests for Identity: Kappa Psi



Official Title: Milton Resnick
 Common Name: "Milt"
 Description. Habitat: Cleveland, Ohio
 Physical Properties: Must it be repeated
 once more! But it fits so well in this case
 —"Good things come in small packages."
 Assay: Ph. C.
 Tests for Identity: Alpha Zeta Omega



Official Title: Edwin H. Whittaker
 Common Name: "Ed"
 Description. Habitat: Clyde, Ohio
 Physical Properties: The pride of Clyde
 and the plague of Brooke Phillips! The
 school is losing an institution when it
 loses Ed's teasing.
 Assay: Ph. C.
 Tests for Identity: Kappa Psi; Glass Presi-
 dent 1, Vice President 2, Student Coun-
 cil 1, 2, 3; Pharmacon Assistant Circula-
 tion Manager 3.

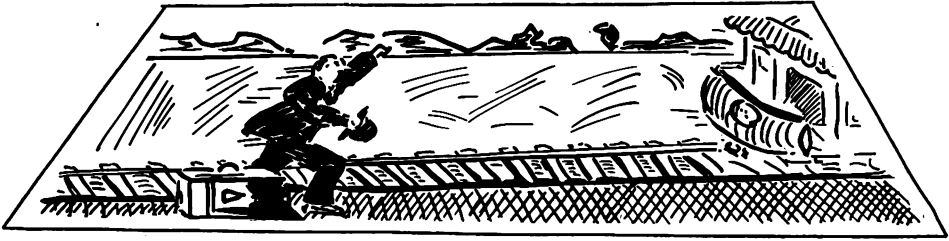


Official Title: Otto L. Wolfert, Jr.
 Common Name: "Ott"
 Description. Habitat: Cleveland, Ohio
 Physical Properties:
 The editor's certainly 'gotto'
 Provide an inscription for Otto;
 He has written the rest
 But his own would be best
 If modesty weren't his motto.
 Assay: Ph. C.
 Tests for Identity: Kappa Psi; Pharmacon
 Reporter 2, 3; Class Treasurer 3.

Official Title: Norman Theodore Andersen
Common Name: "Swede"
Description. Habitat: Cleveland, Ohio
Physical Properties: It must be that a man's geniality is proportional to his size. Andy is a big, big man.
Assay: B. S.
Tests for Identity: Phi Delta Chi; Ph. C. 1925; Class Treasurer 4.

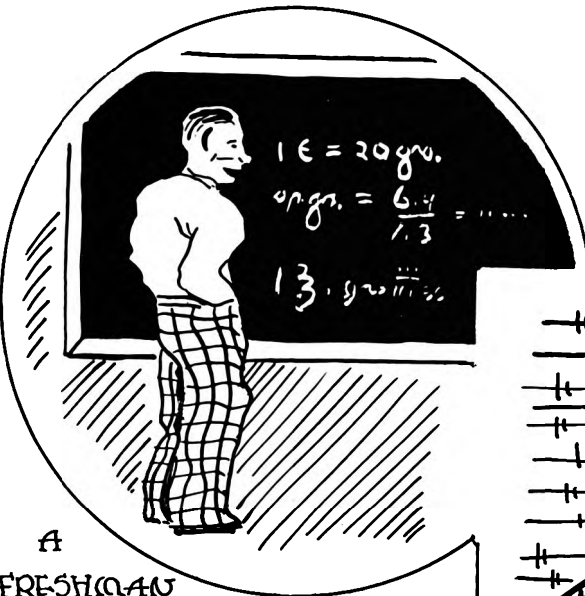
Official Title: Edward Paley
Common Name: "Paley"
Description. Habitat: Cleveland, Ohio
Physical Properties: While he stands unobtrusively in the background, his scholastic deeds stand as far to the front as is possible.
Assay: B. S.
Tests for Identity: Class Vice-president 4; Pharmacon Reporter 1, 2.

Official Title: Philip P. Saginor
Common Name: Phil
Description. Habitat: Cleveland, Ohio
Physical Properties: Phil combines the seriousness of his profession with a love for music, a pleasant and fruitful combination.
Assay: Ph. C.



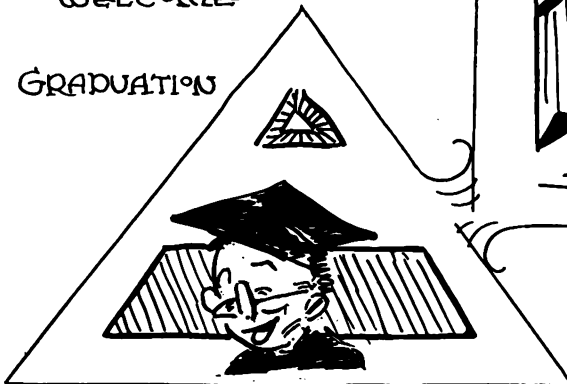
Lilly TRIP

GREEN
TORNADOES



A
FRESHMAN
WELCOME

GRADUATION



PHARMACY DANCE

HIGH SPOTS OF
THE PAST YEAR

Bruehler '30



KAPPA EPSILON

At the opening of the Fall session, six actives returned to school. They were: Bertha Grosser, Lucille Bickford, Ruth Kotershall, Marie Hoefel, Wanda Baygrowitz, and Betty Koci.

On Wednesday, October 30th, the girls were entertained at a party given at the home of Marie Hoefel. On December 6th, the pledges were entertained at an informal dance given in their honor at the Kappa Psi house. Dancing was from nine to one. The chaperones were Mr. and Mrs. Spease and Dr. and Mrs. Hovorka.

Mrs. Spease, Mrs. Harris and Miss Krankas were the guests of honor at a formal dinner given at Park Lane Villa on March 19th, when they were initiated as associate members into Eta Chapter of Kappa Epsilon.

An Alumnae Chapter of Kappa Epsilon was organized on Wednesday, April 9th, when Mrs. Spease entertained the active chapter and nine Alumnae members with a dinner. The following officers for the new chapter were elected: President, Ruth

Johns; Vice-president, Carrie McDowell; Secretary, Helen Kadel and Treasurer, Ethel Albrecht. Up to this time there have been only three Alumnae chapters of Kappa Epsilon, and Eta chapter is very proud of being the youngest chapter to be able to establish an Alumnae chapter. April 11th the chapter entertained at an informal party at the Phi Delta Chi house.

The Lake Shore Hotel was the scene of the Spring formal dinner dance, on the 9th of May. Dinner was served in the ballroom at seven o'clock, followed by dancing from nine to one. Lou Wolfert and his Artisticrats furnished the music and chaperones were Dr. and Mrs. Lankelma and Dr. and Mrs. Hovorka.

Two new chapters of Kappa Epsilon have been established during the past month. One is at Boulder, Colorado, with fifteen members and the other is at Fargo, North Dakota, with nine members.

The officers of Eta chapter for the coming year are: President, Ruth Kotershall, Vice-president and historian, Marie Hoefel, Secretary, Bertha Grosser, and Treasurer, Wanda Baygrowitz.

**Kappa Epsilon
Eta Chapter**

Founded at the University of Minnesota
in 1921

9 Chapters

Established at Reserve in 1928

Honorary Members

Alice K. Spease (Mrs. E.)
Adelaide E. Harris (Mrs. R. J.)
Cecilia Kranaskas

Sorors in Collegio

Nineteen Thirty

Wanda Jeannette Baygrowitz
Lucille Gordon Bickford Ruth Lucille Kotershall

Nineteen Thirty-one

Elizabeth C. Koci Marie A. Hoefer

Nineteen Thirty-two

Bertha H. Grosser

Pledges

Ethel Koloszvay

PHI DELTA CHI ALPHA ALPHA

Founded at the University of Michigan, 1863
Established at Western Reserve University 1923

Fratres in Facultate

Edward Spease Edward Davy

Fratres in Collegio

Nineteen-thirty

N. T. Andersen	Alvin H. Kuttler
Henry Breck	Edgar Cantlon
Earl T. Cook	Henry Gallagher
George L. Bruehler	

Nineteen-thirty-one

Kenneth Lautenschlager	Robert A. Kumpf
Adelbert Patronsky	Nelson Rauschkolb
Nelson R. Schroeder	Laddie Sedely

Nineteen-thirty-two

Allen M. Armstrong	Edwin Miller
George H. Bruehler	

Pledges

Joseph Massey	Lawrence Householder
Clarence Pierstorf	

PHI DELTA CHI

In the fall of 1929 the boys of Alpha Alpha came back to school filled with the pep and enthusiasm that becomes young men after a summer's rest. The term began with fifteen actives, nine men having graduated last June. At the close of this year we list on our roll the following men: N. T. Andersen, A. M. Armstrong, H. Breck, G. L. Bruehler, G. H. Bruehler, E. T. Cook, E. Cantlen, H. W. H. Gallagher, R. A. Kumpf, A. H. Kuttler, K. Lautenschlager, E. W. Miller, A. Patronskey, N. R. Rauschkolb, L. Sedely, and N. Schroeder. During the past semester G. R. Koch and A. Kuchta dropped out of school. Of those now active we regret that we must lose several by graduation: Anderson and Kuttler, B. S.; Gallagher, Bruehler, Cantlon, Cook and Breck, Ph. C. To these men go the best wishes of the chapter for success.

Our social calender for the year, though not so often marked, has been one worthy of mention. Our first dance was on October the 25th at the Woman's Club. This dance was dedicated to the pledges.

December 13th, Rauschkolb and Sedely entered the mysteries of Phi Delta Chi. On

December 22nd the chapter held its first house party of the year.

A smoker was given by our pledge organization on the 21st of February and on the eve of the 28th Armstrong and G. H. Bruehler were initiated.

Last, but not least, in the department of entertainment came our Spring dance, on the evening of May 16th. About twenty-five couples attended and danced to the enhancing strains of melodious music furnished by the popular nine-piece Orchard Lake orchestra. The Ridgewood County Club was the scene of this delightful dance and chaperonage was furnished by Brother and Mrs. William Hosler. We were also honored by the presence of Dr. and Mrs. H. P. Lankelma. Many Alumni were present and visitors including Brothers Sanger and Schweinfurth of Xi in Columbus. The dance was arranged for by a committee composed of Kuttler, chairman, and Rauschkolb, Miller and Breck.

During the past semester while Spring vacation was in session, considerable painting and redecorating was done to our chapter house.

This year Alpha Alpha boasted of a bas-

ketball team consisting of N. Schroeder, captain; E. Cantlon, manager; G. H. Bruehler, G. L. Bruehler, N. T. Andersen, A. Patronskey and pledge L. Householder. A. Kuchta acted as coach.

During the past semester, the chapter has taken in one new pledge, Joseph Massey. We have retained two other pledges from the first semester. They are: L. Householder and C. Pierstorf.

On May 12th, the regular semi-annual election of chapter officials took place. An election committee composed of Andersen, chairman, and Sedely, Patronskey and Lautenschlager, submitted the following candidates who were unanimously elected by the chapter: Kumpf, president; Patronskey, vice-president; Sedely, secretary; and Miller, treasurer. Chapter room officers include Armstrong, W. M. A. Rauschkolb, W. P. and Bruehler, W. I. G. Bruehler will act as *Alfa* editor, Miller as steward and Lautenschlager as *Communicator* correspondent. These men will serve during the ensuing semester.

The chapter wishes to congratulate Brother Edward Davy on being selected to serve on the Revision Committee of the United States Pharmacopoeia.

PHI DELTA CHI ALUMNI NEWS

William Hosler is in charge of the Pharmaceutical laboratories of the Miller Drug Co.

Richard Koch is now employed by the Cleveland Clinic Foundation in the Clinic Pharmacy.

Kessler has again taken a position with the Marshall Drug Co. at the Playhouse Square.

Jerry Kibler is employed by the Harvey Co. and will be located in the Union Terminal Tower Drug store in the near future.

Walter F. Wargell is at present the Cleveland manager for the H. K. Mulford Company.

Henry W. Kumpf is still located with the Gorrell Pharmacies at Akron as manager of their square store.

Paul Steidl is proprietor of a store in Cuyahoga Falls.

Vic Germ is still the chief chemist at Lyndhurst.

R. Bennett Gilbert is still located with the Carter Lead Co.

Michael Gayok is now located in Cleve-

land and is working at the Mall Drug Co. Mike recently passed the Pennsylvania Board Exam and is going to Columbus in June to take the Ohio exam.

Clarence Speice will graduate from the School of Pharmacy of Ohio Northern University in June.

Robert E. Millager is representative for the Upjohn Company.

Laurence H. Baldinger, instructor at the University of Notre Dame will return with his wife to Cleveland to spend the summer months. "Baldy" will probably be employed by the Standard Drug Co. over this period.

Rudolph Schreiner is employed by the Standard Drug Co. at Clifton Boulevard and Detroit Avenue.

Adam Rudibaugh owns a store in Lisbon and is quite a successful business man.

Paul Cusick is doing regular relief work at several stores on the West side. Paul is a regular visitor at the house.

Donald English is manager of the Marshall store at Superior and E. 125th St.

Wilbur Ischie remains with the Coca Cola Company and is sporting a big gray Packard touring car.

Tom Highland works for the Marshall Drug Co. at Superior and E. 105 St. Tom has recently taken up the strenuous game of golf.

Carl Shane remains with the Roth and Hug Drug Co. of Canton. Carl is a frequent visitor in Cleveland.

A Kuchta is working for the Marshall Drug Co. at Lorain and 89th St. Al may return to school in the Fall in search of a B. S.

William Brown of Lorain still has charge of two stores in Lorain.

George Brown of Youngstown is yet with the Bloom Pharmacy. George is a frequent visitor at the chapter house.

Lon Lyman is located in Youngstown working out his apprenticeship. Lon may take the Board exam in June.

Bill Prentiss is stationmaster at Newark, New Jersey.

Stanley P. DeVille has successfully finished his second year at Reserve Medical School.

Congratulations to Brothers H. Kumpf, R. B. Gilbert, Knaus, Speice and English who have recently entered the state of matrimony.

KAPPA PSI

With the opening of school last fall, appeared fifteen, sun-tanned, cheerful men: Harry Valway, Alex Celke, Ed Whittaker, Bob Fitch, Brooke Phillips, Ralph Cullinan, George Novatny, Weldon Rehburg, Roger Lager, Russ McArter, Karl Schweickardt, Eddie Hofer, Ott Wolfert, Mike Lauria and Ben Rosanski.

Among the most important engagements of the year was the opening night smoker, in which the recruits for duty in the army of Pharmacy School were introduced to each other. On October the fourth this same detail again went into action in the annual pledge dance, rushing "over the top" to capture the laurels of victory. One of the most difficult and successful feats of the group was the determined siege resulting in the capturing of valuable plunder, a new Brunswick Panatope. On November the fifteenth, the benefits of the plunder were distributed among the members of the troop and their friends at an enjoyable evening of dancing.

In February, everybody enjoyed a short leave of absence, and returning, found the ranks thinned with the departure of Novatny and Rosanski. But the line of sol-

diery was again filled and lengthened when Rookies Sabo, Kaufhold, Webb and Obester became full-fledged soldiers. Shortly afterward, Valway left his post as leader of the troop and became a mere private in the ranks, Celke taking his place as captain. With new soldiers in the troop and new officers at its head, the men stormed Fort Dance on March the seventh and entering, found the structure filled with enjoyment and pleasure. Their delight in such booty was great. Then on the 4th and 5th of April, when army activities were at a standstill, legates of Kappa Psi Regiment of Cleveland journeyed to Columbus. There with the legates from each of the other Kappa Psi Regiments of Ohio, important problems of warfare were discussed. Valway, who originated the idea of a meeting, presided over the convention.

The long siege now draws to a close, victory is within our grasp, and this section of the great war will soon be finished. Then the army will retire to the rest area. Four members of the Kappa Psi regiment have completed their terms of enlistment and will return no more—Phillips, Whittaker, Wolfert and Cullinan. The rest of the soldiers will be held in reserve for three months before being sent into action again.

IN MEMORIAM





John Morse



Michael Lancia



Donald B. Karpinski



Stephen Trebec



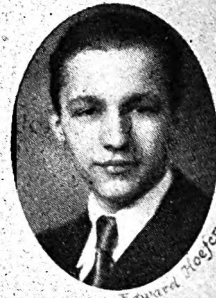
Roger L. Beyer



Harry Vailley



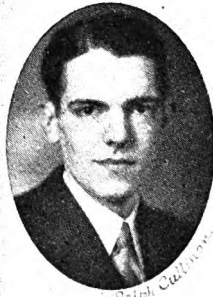
Edwin H. Whitaker



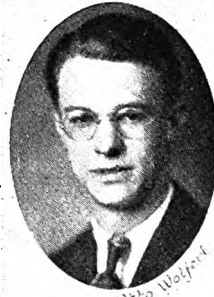
Edward Hofer



Brooke A. Phillips



Ralph Cullinan



Otto Wolpert



Stephen Sisto



John Oberster



Weldon Newman



Winton Webb

W. Webb
President



Edmond J. Brown



Robert J. Brown



KAPPA PSI



Neil Schwenk



Russell W. Brown, Sec.

KAPPA PSI**Beta Beta Chapter**

Founded at Russell Military Academy in 1879

70 Chapters

Established at Reserve in 1910

Fratres in Facultate

Edward Spease	Robert Stockhaus
Neil T. Chamberlin	Herman P. Lankelma
Robert M. Porter	Franklin J. Bacon
Paul R. Hudson	

Frater in Universitate

James Speer Neely

Frater Ex-Collegio

Otto A. Rehburg

Fratres in Collegio

Nineteen thirty

Ralph Cullinan	Edwin H. Whittaker
Brooke K. Phillips	Otto L. Wolfert

Nineteen thirty-one

Alexander Celke	Harry Valway
Robert Fitch	

Nineteen thirty-two

Roger Lager	Karl Schweickardt
Edward Hoefer	M. Lauria
Russell McArtor	Winton Webb
Weldon Rehburg	John Obester
Donald Kaufhold	

Nineteen Thirty-three

Steve Sabo

Pledges

John Morse	Steve Trebec
Orville Call	

ALPHA ZETA OMEGA

Theta Chapter

Founded at Philadelphia College of
Pharmacy in 1910

10 active Chapters

Established at Reserve in 1926

Fratres in Collegio

Nineteen Thirty

Abe Harris

Ernest T. Gross

Joseph Dworkin

Milton Resnick

Nineteen Thirty-one

Joe Eisenberg

Max Lessowitz

Nineteen Thirty-two

Saul Eisenberg

**ALPHA ZETA OMEGA**

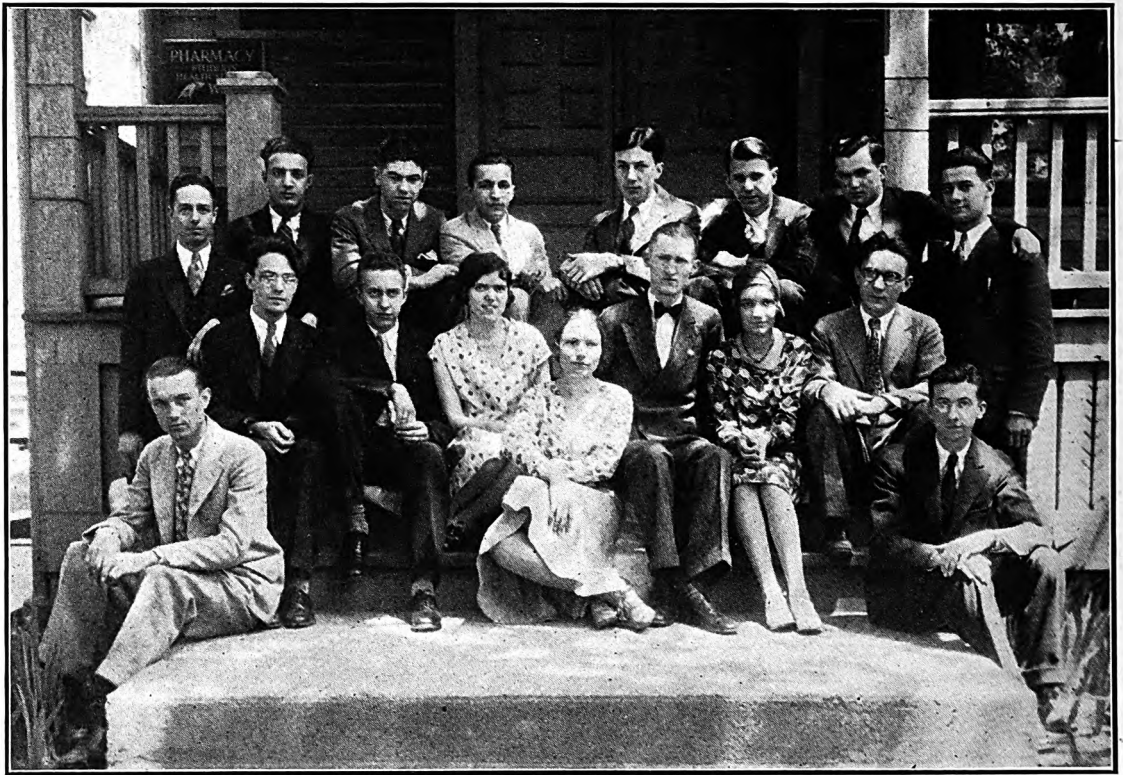
This last year has seen unusual fraternal activity. Our social achievements were numerous, the smoker being the most outstanding. Others were held at such places as the Rainbow Room of the Hotel Winton, Wille's Lake Shore Gardens, The Bronze Room of the Allerton, and the Blue Room of the Hollenden.

At these smokers addresses were delivered by F. E. Sless, a prominent organizer in pharmacy, and J. Klein of Pittsburgh, on such subjects as "Pharmacy as a Profession" and "The Manufacturing Pharmacist." The other meetings were devoted to less involved affairs, such as the consumption of food, bridge, tiddly-winks and pinochle. Some other social features of the year were a Pledge Dance at the Westlake Hotel and a banquet at the Winton. Good will trips were taken by various members

to other chapters in Louisville, Pittsburgh, New York, Cincinnati and Detroit.

At the present time the graduates are busily engaged in study at their summer home, the Azoan Cottage. Here are assembled all the State Board candidates for quizzing which is given by the older members. The supreme test as commonly phrased "knowing one's stuff" is proved by the result of the State Board. Here theories are put into practice and the success that has been shown by our former candidates shows that our slate is clean by having the record of no failures on any state board in the entire history of the local chapter.

The new fraters, Saul Eisenberg, Max Lessowitz, and Milton Resnick, are eagerly looking forward to the National Convention in Cleveland this year. As this affair will include a boat trip to Cedar Point, a dance at the Willowick Country Club and other affairs at Wille's and the Winton, it is eagerly anticipated.



SOPHOMORE CLASS

Jerome Adelstein
 George Henry Gerlach
 Michael Girbino
 Clara Gertrude Goldberg
 Lister Frederick Grai
 Bertha Henrietta Grosser
 Edward William Hoefer
 Marie Agnes Hoefer
 Donald Leigh Kaufhold
 Elizabeth C. Koci
 Gustav Charles Kostell
 Richard Harry Kroeger
 Robert Arthur Kumpf
 Roger Kenneth Lager
 Michael Anthony Lauria

Kennith N. Lautenschlager
 Max Ben Lessowitz
 Russell Bailey McArtor
 Julius Miller
 John Aloysius Obester
 Stephen Wilkins Oscar
 Oscar Padwa
 Adelbert Patronskey
 Charles Joseph Pilat
 Virginia Veronica Portner
 Nelson Karl Rauschkolb
 Nelson Schroeder
 Karl William Schweickardt
 Laddie L. Sedely
 Winton Adelbert Webb

Barney Weinstein

EXPRESSED OIL

Liquor Comes High

Mrs. House—"And how is your husband this morning?"

Mrs. Holman—"Oh, very poorly. He's got such an expensive disease. The doctor says he must be kept in good spirits."—*Tit-Bits*.

The farmer is now blaming the farm crop surplus on our dieting ladies.

Tired Business Man—"I'm feeling a little run down doctor, can you suggest a tonic—some pills or something?"

Doctor—"My dear fellow, you should take up golf—it is much better to hit a pill and chase it than to swallow it."—*Boston Transcript*.

Overpaid

Graduate—"Will you pay me what I'm worth?"

Employer—"I'll do better than that. I'll give you a small salary to start with."—*Boston News Bureau*.

Doc.—I can only prescribe whiskey for you when it is required for illness. Please tell me the symptoms of your sickness."

Patient—"What would you advise, Doctor?"

Then The Storm

Boy—"Dad, the barometer has fallen."

Father—"Very much?"

Boy—(with guilty look)—"About five feet. It's broken."

Small Boy—"Dad, how do they catch lunatics?"

Father—"With face powder, beautiful dresses and pretty smiles, my son."—*Tit Bits (London)*

How much Jack?

Customer—"How much was that bill?"

Clerk—"Beg pardon, madam, but my name is Jim."

Too Risky For Him

Doctor—"Tell your wife not to worry about her deafness, as it is merely an indication of advancing years."

Husband—"Would you mind telling her yourself, Doctor?"—*From Weekly Scotsman*.

For Swelled Head

Customer—"I want some headache powders."

Former Hat Store Clerk—"What size please?"

Goo—"I saw Mary at the beach."

Fey—"What sort of a bathing suit was she wearing?"

Goo—"Don't know; she was reading a book and I couldn't see it."—*Collegian*.

Mr. Crabber—"My dear, when will you learn that razor blades are not made for sharpening pencils?"

Mrs. Crabber—"When you learn that butter dishes are not made for ash trays."—*Yellow Jacket*.

St. Peter was interviewing the fair damsel at the pearly gate: "Did you, while on earth," he asked, "indulge in necking, petting, smoking, drinking or dancing?"

"Never!" she retorted emphatically.

"Then, why haven't you reported here sooner?" said Pete. "You have been dead a long time."

It Can Happen

"What is your brother in school?"

"Halfback."

"I mean in studies."

"Way back."

Fussy Lady Patient—"I was suffering so much, doctor, that I wanted to die."

Doctor—"You did right to call me in, dear lady."—*Medical Students Magazine*.

One Zealous Judge

Cop—"You're pinched for speeding. Any excuse?"

Victim—"I'm the Judge, and am in a hurry to get to the office to fine a lot of speeders."

Doctor—"You are a great deal better this morning, I see. You followed my directions and that prescription did the business."

Patient—"I couldn't take any of that prescription you gave me, doctor."

Doctor—"What! What do you mean you couldn't take any of it?"

Patient—"How could I—it says on the label, 'keep the bottle tightly corked'."—*Medical Students Magazine*.

MILLER DRUG STORES

CLEVELAND, OHIO

Ethical Prescriptionists

12435 Cedar Road

10657 Euclid Avenue

1123 Euclid Avenue

13112 Shaker Blvd.

3328 Carnegie Avenue

L. P. Miller '17

Geo. Miller '22

CALL US—WE DELIVER

THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

The New City Hospital Pharmacy

CLEVELAND, OHIO

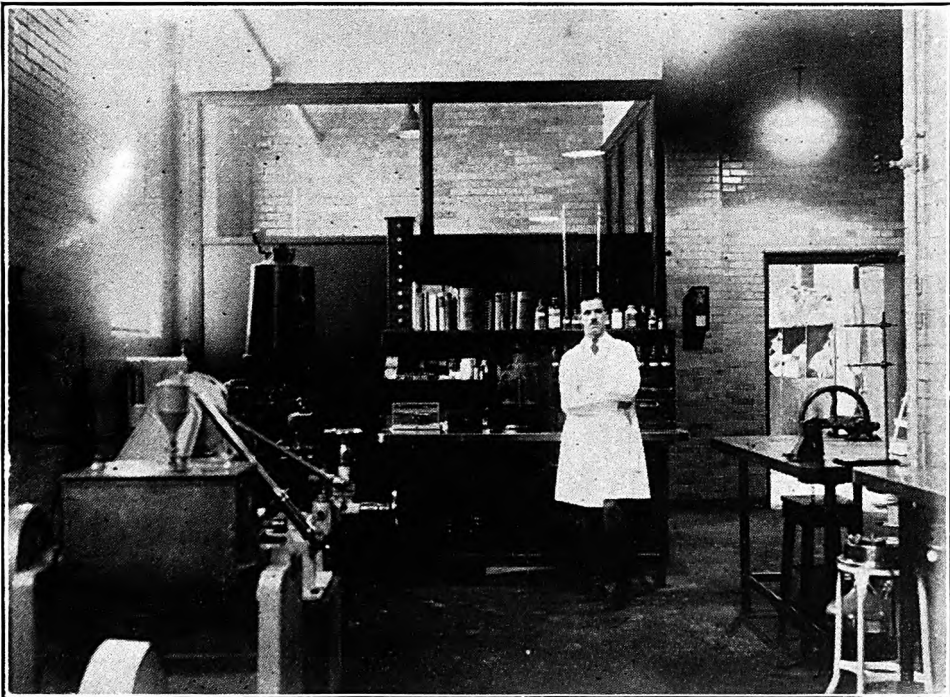
In many of our American Hospitals, the Pharmacy is placed in some space which cannot be used to advantage for any other purpose. Instances have been known where the Pharmacy was simply tolerated; accepted as a sort of necessary evil. This was, to some extent, true at City Hospital, until recently.

In 1927, a reorganization of the Pharmacy at City Hospital was completed. At that time, steps were taken to develop this division of the Hospital into a true Pharmacy, one that would be used to its full worth by physicians and nurses, and one that would demonstrate its real value as an aid in care of the sick in both the Hospital proper and the Out Patient Department.

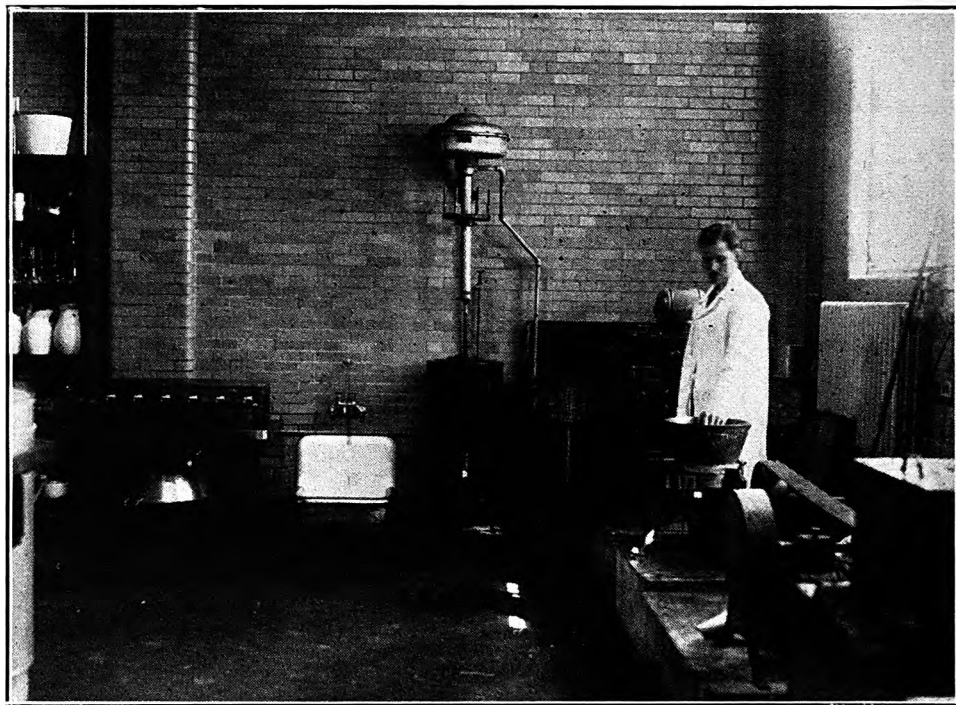
In any activity, adoption of new policies

and reorganization of routine procedures bring with them difficulties. It was true in this case. The first difficulty was selection of personnel. Mr. K. Y. Streng, who had previously been Assistant Pharmacist, was chosen as Pharmacist in charge, and a staff was selected. Efforts were then directed toward systematizing the dispensing, especially that of narcotics and liquor, and manufacturing such products as could not easily be purchased on the outside, or where cost of manufacturing would show a substantial saving compared to purchase cost.

During the interim between the reorganization and March, 1930, we perfected our new system for dispensing and properly recording same, and, by materially increasing the number of products manufactured,



City Hospital Pharmacy—West End Manufacturing Room



City Hospital Pharmacy—East End Manufacturing Room

placed the Pharmacy on such a basis as to make it self-supporting. Through this entire period of reorganization and development, we were busy in our effort to have new space provided for a Pharmacy constructed for this purpose. We were finally successful, and in March of 1930 we moved into our new location. This is a separate building, all on one floor. The space is 104 ft. by 41 ft. 8 in., well lighted and ventilated, and has every modern facility. The interior is of hard face brick, and the floors in the work rooms are of elastic material. A drinking fountain, proper wash room and toilet facilities, electric refrigeration, and hot water heat are provided. The space is conveniently divided into separate rooms, each designed and equipped for its particular purpose. In these rooms, all storage shelves and cabinets are of steel, with many of the cabinets specially designed. The cork holder, cabinet for storage and protection of ointments in jars, the glass slabs for mixing ointments, the cabinet for safe storage of narcotics, and the counter with its storage shelves are all specially designed. All prescription counters, mixing benches, and table tops are of monel metal.

Among the various rooms of interest is the main dispensing room. Here are the prescription counters with the most modern equipment, and here also is space for filling drug trucks carrying supplies to the forty-seven divisions of the Hospital. There is a separate room for storage of bottles, jars, and other empty containers. Another room provides storage for chemicals. There is a separate room for liquid preparations. In this room is a long, elevated platform together with proper tilting apparatus so that drums may be conveniently handled. Also available is an electric-driven pump for the transfer of liquids from drums to large glass-lined vats. All drums are equipped with modern hand pumps. No inflammable liquids are kept in the room, these being stored in a separate space of vault construction, unheated, and with direct ventilation to the atmosphere. All manufacturing is done in a special room for the purpose. Here is assembled most of the manufacturing equipment—capsule-filling machine, tube-filling and closing machine, homogenizer, powder mixer, ointment mill, mechanical mixers, tablet machine, still, filters, and such other equipment as is necessary.

The new Pharmacy was designed, constructed, and equipped with the intention of ultimately purchasing only basic materials, and manufacturing all tinctures, emulsions, elixirs, ointments, uncoated compressed tablets, solutions, and mixtures, used both in the Hospital and in the Out Patient Department. We have now almost reached that goal, and we feel that the plan provides for use, by the physicians and nurses, products of uniform high quality which will give satisfactory, standardized therapeutic results. In addition, our cost to manufacture, including overhead and all other proper items, is materially lower than the purchase price of the completed products. Another result of this development is not to be overlooked. It has discouraged the use of proprietary preparations while encouraging the use of official drugs, and it has taught the physicians that consultation with the Pharmacist is often of great help in their problems.

The City Hospital is an institution encouraging research and investigative work. In the Pharmacy, as in all other divisions, will be found the necessary laboratory and

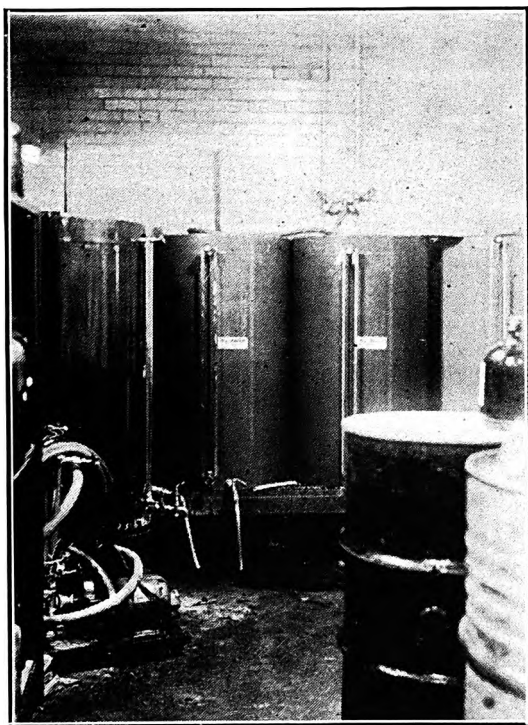
equipment, together with a sufficient library, to enable us not only to make such investigations as are needful to solve daily problems, but to do such research work or original experiments as may interest the Pharmacist, or as may be suggested by the staff.

This new and true Pharmacy serves a hospital with eleven hundred beds at present. By January first, the number will be increased to sixteen hundred, by far the largest in the City of Cleveland. Then, there are twenty-five thousand visits in the Out Patient Department per year which also must be served. A staff of six people, three of whom are registered pharmacists, is necessary to care for all these patients. The Pharmacist in charge assists in teaching student nurses, presenting a course in drugs and solutions. The new building cost about thirty-six thousand dollars, and the equipment, about fourteen thousand dollars. During April, May, and June, there has been manufactured three thousand, two hundred and forty-seven (3,247) gallons of liquid, nine hundred, eighty-two (982) pounds of ointment, and three hundred, seventy-one thousand (371,000) compressed tablets. There are about thirteen hundred (1300) prescriptions filled each month for patients from the Out Patient Department.

Developments of the true Pharmacy at the City Hospital have been made possible through many factors. The administration has given complete support. Although City Hospital is municipally owned and operated, there has been no outside interference, either political or otherwise. Physicians and nurses have both co-operated and helped to an unusual degree. The School of Pharmacy of Western Reserve University and its staff have made many suggestions and given much advice.

The Pharmacist in charge and his staff have been ambitious and aggressive. Through this combination of ability and effort, there has been developed a true Pharmacy which, every one at City Hospital insists, is second to none. The administration appreciates this fact, and has recently rewarded the individual deserving the most credit for the development by appointing Mr. K. Y. Streng to the position of assistant superintendent. Along with his other duties and responsibilities, however, he will still retain active charge of the Pharmacy.

(EDITOR'S NOTE: This article was submitted by the City Hospital.)



Drum Dispensing Room

THE REVISION OF THE NATIONAL FORMULARY NOW UNDER WAY

The National Formulary VI Revision Committee held its first meeting in Cleveland, early in July. The Committee was definitely organized into the following subcommittees:

1. Subcommittee on Pharmacognosy—E. L. Newcomb, Chairman; Oliver A. Farwell.

2. Subcommittee on Chemicals—Glenn L. Jenkins, Chairman; H. V. Arny, Gustav Bachman, H. A. Langenhan.

3. Subcommittee on Solution Preparations—H. A. Langenhan, Chairman; Gustav Bachman, I. A. Becker, Adley B. Nichols, Louis Saalbach, Bernard Fantus.

4. Subcommittee on Extractive Preparations—Wilbur L. Scoville, Chairman; Samuel L. Hilton, Louis Saalbach, H. A. Langenhan, Oliver A. Farwell.

5. Subcommittee on Solid Preparations for Internal Use—I. A. Becker, Chairman; Adley B. Nichols, Gustav Bachman, Wilbur L. Scoville.

6. Subcommittee on External Preparations—Louis Saalbach, Chairman; I. A. Becker, Adley B. Nichols, Leonard A. Seltzer, H. V. Arny.

7. Subcommittee on Miscellaneous Preparations—Leonard A. Seltzer, Chairman; E. L. Newcomb, Samuel L. Hilton, Wilbur L. Scoville.

8. Subcommittee on Posology and Biologic Items—Bernard Fantus, Chairman; Paul S. Pittenger, Glenn L. Jenkins.

9. Subcommittee on Nomenclature and Tables—H. V. Arny, Chairman; Bernard Fantus, Glenn L. Jenkins.

The Committee as a whole acts as the Committee on Scope, considering all admissions and deletions.

In addition to the above, two auxiliary subcommittees were authorized: One on dental preparations, the other on veterinary preparations, the American Dental Association and the American Veterinary Medical Association being invited to appoint members from their respective organizations to work with the Committee in handling specific dental and veterinary items.

RETAIL DRUG STORE PROBLEMS TO BE ANALYZED

A survey of retail drug store problems is to be held in St. Louis, Mo., beginning this month. It will be directed by the United States Department of Commerce and will probably take a year to complete. Most of the actual work will be done by subcommittees working under the general committee to be known as "The National Drug Store Survey Committee." This committee will be made up of members appointed by national organizations of trade and industry distributing through drug channels, each such association to be represented by one member.

According to tentative plans, the fundamental phase of the survey will include five

major classes of information; namely (1) retail costs; (2) retail processes and store arrangement; (3) wholesale and manufacturing costs; (4) study of credit conditions and causes of business failures; and (5) market survey.

In addition to the information which will probably be gathered from about ten stores in St. Louis, including chain store units, it is planned to select one or more stores recognized as very high class and successful independent outlets, which will be studied as examples of good merchandising.

In the language of the conference "it is proposed to find out a great many things about a few stores in one city, rather than a few things about numerous stores scattered about the country." In effect, St. Louis is being selected to serve as a national laboratory for a study of retail drug store problems.

THREE ETHICAL DRUG FIRMS UNITE BUYING POWERS, LABORATORIES

The buying power and laboratory facilities of the Llewellyn Laboratories, Inc., of Philadelphia, The Schettler Drug Co., a Detroit chain, and the Miller Drug Co., operators in Cleveland of both a wholesale house and a chain, have been united.

The three concerns, doing a combined business of \$3,000,000 annually, will retain their individual ownership and identity, S. W. Leidich, president of Llewellyn, announces, only the buying and laboratory departments having been linked to lower costs and gain other mutual advantages.

The Llewellyn and Miller laboratories manufacture and sell ethical drugs for compounding to the drug and medical trade. Lower prices in compounding drugs will be one result of the union, it was said.

Plans are already being developed to widen the scope of the three companies' service to the professions, and to increase the number of retail outlets. The Miller company already has several foreign connections which will now be available to the other two concerns.

Central research laboratories are to be maintained, Mr. Leidich said.

The three companies are among the largest in the field in the preparing and selling of ethical drugs.

Drug Trade News—September 8, 1930.

THE U. S. P. CONVENTION CONTROVERSY

The recent pharmacopeial convention held in Washington during the month of May is largely a matter of history at this time and only as the work of the Revision Committee unfolds itself, will pharmacists and the public in general be especially interested in the aftermath.

However, some phases of the affair are important to the extent that they concern the future welfare of both pharmacy and medicine. Because of this we venture to submit two contrasting viewpoints, both medical, taken from the columns of the *American Medical Journal*.

In an editorial of the May 24th issue, under the caption "The Pharmacopeial Convention" the *Journal*, in the concluding paragraph, says:

"The present organization of the U. S. Pharmacopeial convention is undemocratic and unscientific. By its very nature it permits any political interest willing to work sufficiently hard to stack the convention with representatives. A properly democratic scheme would involve representation in the convention of state pharmaceutical organizations and state medical organizations in a suitable proportion to the memberships of the state societies. It would involve representation only by bona fide members of such organizations. It would involve the establishment of a by-law to the effect that the scope of the Pharmacopeia so far as concerns therapeutic usefulness would be determined by medical members, and that the scope so far as concerns preparations necessary for pharmaceutical purposes be determined by pharmaceutical members. It would involve the selection of members of the Revision Committee on the basis of their special knowledge. The Revision Committee could then constitute a controlling body which could pass on the reports of experts—medical, pharmaceutical and editorial—who would construct the Pharmacopeia. Obviously, such a scheme would permit selection of the best qualified men whether or not they could attend the convention. Unless some such scientific plan is adopted, it may be necessary to advocate government control of the entire matter. The present system must inevitably lead to confusion, to degeneration, and to the break-

ing down of such standards as have been reached in the past by self-sacrificing effort on the part of physicians and pharmacists of high ideals."

In an issue of the same *Journal*, dated July 19th, Dr. A. D. Hirschfelder, Professor of Pharmacology, University of Minnesota Medical School, defends the action of the non-medical members of the convention in the following language:

"You will recall that every medical school should be officially represented at the Pharmacopeial convention by three representatives, and that the medical schools are ex officio members of the convention. A few of, but by no means all, the medical schools of the country had one representative, but I know of none that were represented by more. As a matter of fact, some of the medical schools, although they appointed three delegates, did not pay the expenses of any. The schools of pharmacy were somewhat better represented. The representation of the state medical societies was much worse. Only a few of them showed up and some of these were members of manufacturing drug firms who had been appointed as representatives of state medical societies. Since the drug firms paid the way of their members, it saved the state societies expense. In fact, almost all of the drug firm representation that you so justly complain of was the direct fault of the state medical societies whom they represented.

"I think you are doing a great injustice as well as attempting to reverse the ordinary laws of physics if you expect water to flow higher than its source. I think you ought to begin and condemn the state medical societies who allowed themselves to be thus represented rather than blame the manufacturing chemists if they look out for their own interests more assiduously than the medical societies look out for the broader interests of medical science and practice.

"If the state medical societies and medical schools had sent their representatives to the Pharmacopeial convention as conscientiously as the pharmacists, academic and commercial did, there would be no complaint of inadequate representation of the medical profession. The medical representatives would not be outvoted and the pharmacists would probably not have justifica-

tion for their complaint that, since most of the work on the Pharmacopoeia would be done by pharmacists anyway, it made little difference whether the medical men had a larger representation or not."

NO STANDARDS FOR PROPRIETARY MEDICINES

"Patent medicines are not described in the U. S. Pharmacopoeia or the National Formulary. For these, therefore, there is no standard except such as the manufacturer himself chooses to set up. If he states his formula on the label, as is becoming more and more common, this statement becomes the standard, and the law requires that the products be what it purports to be."

This was a salient point recently presented to radio listeners by W. R. M. Wharton of the U. S. Food and Drug Administration in one of a series of addresses in which he explained how the lay public is guided and protected by labels on drug products.

After informing his hearers how the Pharmacopoeia and the National Formulary set up legal standards for many common drug products, Mr. Wharton continued:

Must Show Nature

"The law, however, makes an exception in its provisions which permits the sale under an official name of a drug which does not meet the standard required by these authorities, if the label clearly shows that the article is not the official product and further shows exactly what it is.

"For example, magnesium citrate solution is required by the Pharmacopoeia to contain 11½% of magnesia and 10% of citric acid. Some manufacturers claim that this solution is too acid to suit their customers. They, therefore, desire to use a lower proportion of the expensive citric acid. The law permits them to do this, but requires that the label inform the purchaser that the product which he is buying is not the article described in the U. S. P. It must further inform him just what it really is. Thus, if it contains only 9% of citric acid, the label must so state.

"The next time you buy a bottle of magnesium citrate solution, if you want the standard pharmacopoeial preparation, read

the label to be sure you are not purchasing a sub-standard product. If the label bears the statement 'Magnesium Citrate Solution,' you may be reasonably sure you are getting the official preparation. If the label states that the article is 'Not U. S. P.,' it is not the product you desire.

Label Tells If Suitable

"If you want a product which differs from the official preparation, you may ascertain by reading the label whether or not any particular preparation is suitable.

"Sometimes the manufacturer attempts to avoid informing the purchaser of the character of the article by not calling it magnesium citrate solution. He may give his product a fanciful name, such as 'Tastymeg.' The general appearance of the package will be the same as that of magnesium citrate solution and, if the purchaser does not read the label, he may be deceived.

"The law requires that the presence of dangerous and habit-forming drugs be announced on the label. Included in this list are alcohol, such heart depressants as acetanilid and acetphenetidin, the narcotics, morphine, codeine, cocaine, and cannabis indica and various other drugs. The law does not require the manufacturer to warn the consumer that these drugs are potentially harmful.

The manufacturer, however, must not disarm suspicion by stating that his product is harmless or that it will not affect the heart, or otherwise create the impression that the medicine may be taken with impunity. The next time you buy a package of headache tablets, if you buy headache tablets, note whether or not the label bears a statement that the tablets contain a grain of acetanilid each. If this statement appears, it is the warning which the law requires the manufacturer to give you that use of the product may be attended with danger.

"Finally, the law requires that the manufacturer tell the truth on his label about the effects his medicine will produce. Get your information from the label rather than from lurid advertising in newspapers, magazines, circular letters, booklets, pamphlets, etc.

"You may generally classify as a fraud any product which is conservatively labeled but extravagantly advertised."

MISSING

A survey of our library this summer shows the absence of the following list of books. These books have been borrowed from the library without being charged against the borrowers, and the absence of them has seriously crippled the efficiency of our departmental library. A departmental library is not large enough to keep a librarian in charge, and it is doubtful if even then a librarian would be able to prevent these books from being taken out.

A number of these books cannot be replaced, and, while it is very doubtful if anyone who took them had any idea of keeping them permanently, it is also true that they have been kept so long that the individual has not had an opportunity to return them to the book shelves.

Will you not, as members of the alumni of the School of Pharmacy, go over all the books in your possession and see if you cannot find some of these missing ones? Just mail them to us or send them to us, because some of them we cannot replace.

If one goes over this list rather carefully, it is apparent that part of these books were taken out for the purpose of studying for State Board examinations, and the individual has forgotten that other students may wish at some time in the future to do likewise. Some of them have been taken out because individuals wish to make a study of a particular thing, and, doubtless, many of them have just been lost by the individuals who have withdrawn them from the book shelves.

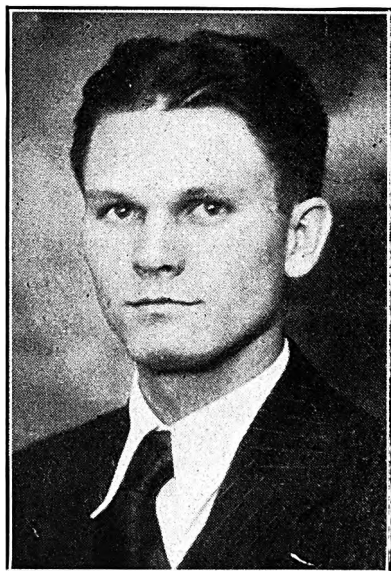
May we not urge upon you the fact that it is not so much the intrinsic financial cost of these books that counts, but it is the fact that we cannot replace many of them and the fact that you are denying somebody else the privilege of using the books when you have been so careless with them. Some of these books were new and only on the shelves a few months. Others are books that are entirely out of print.

Will you please help us to replace them? You will find upon every one of them the name "Pharmacy" and a catalogue number, both on the outside and on the title page of the book. Just mail them to the School of Pharmacy, 2029 Adelbert Road.

BOOKS MISSING FROM THE SCHOOL OF PHARMACY LIBRARY
July, 1930

- Bachmann and Bliss—The Essentials of Physiology, 1924.
 Baskerville, Charles—A Course in Qualitative Chemical Analysis, 1917.
 Brown, W. H.—A Textbook of General Botany, 1925.
 Brundage, A. H.—A Manual of Toxicology, 1923—14th Edition.
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 Ruddiman, E. A.—Whys in Pharmacy, 1917—2nd Edition (2 copies).
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- Sollmann, T. H.—The Actions of Drugs, 1917.
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 U. S. Surgeon-General's Office—Laboratory Methods of the United States Army, Compiled by the Division of Infectious Diseases and Laboratories, 1918.
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 Wright, J. S.—A Guide to the Organic Drugs of the United States 1900 and a Few of the more Commonly used Unofficial Drugs, 1906—2nd Edition.
 Zinsser, Hans—A Textbook of Bacteriology, 1927—6th Edition.



Earl E. Hester

NEW ASSISTANT IN PHARMACY

Mr. Earl E. Hester, B. S., a graduate of the University of South Carolina, class of 1930, comes to our school this Fall as an Assistant in Pharmacy and at the same time pursuing work for a higher degree in the Western Reserve Graduate School.

DRUG STORE HOURS

Drug store hours, always a timely topic, are of special importance now because to cut down overhead many druggists are working with little or no relief. On the average drug stores are open for business one hundred and five hours per week.

Where he lives away from the store, it is physically impossible, to say nothing of ef-

ficient work, for one to be in the store that much. The day has to be shortened.

Since in most stores the evening hours are the best, in point of business done, a radical cut in evening store hours is impractical. Not so with the morning hours. In many locations, when the business done does not justify sufficient help, I think it would be practical to open the store at ten o'clock or at noon. In that event, however, the store hours should be prominently displayed on the front door and strictly followed.

People do not expect one to kill himself so as to make a living and there is neither dollars nor sense in so doing.

From the *Northern Ohio Druggist*.

WHY DRUGS DRUG US

Knocking a man on the head and "knocking him out" with a stiff dose of whisky do just the same thing to his nerve cells.

They are stiffened and whitened like a boiled egg.

In this state, they don't work, and the victim loses consciousness.

This discovery, made recently in the laboratories of Cornell University, was announced there recently, and is thus reported in a dispatch from Ithaca to the New York *Herald Tribune*. Says its correspondent:

"The reason why anesthetics cause unconsciousness was announced recently at Cornell University. They cause nerve cells to become thick and white, like tiny hard-boiled eggs. Oblivion accompanies this change, and consciousness does not return until the cells resume their normal state.

"A knockout blow on the head or narcotics or intoxication all produce similar cell changes. Thus the 'kick' in a drink is actually in effect like a physical blow. 'Boiled,' 'stewed' and 'stiff' applied to drug and drink effects are more than slang; they are the simple truth about changes invisible to the eye."

The discoveries link together physical states formerly considered quite distinct, and open a new field for developing drug uses. They were reported to the eighth colloid symposium by Dr. G. H. Richter, national research fellow at Cornell. Colloids are substances made of drops, bubbles, grains, filaments, or films. The cells of the human body are composed largely of colloids. Says Dr. Richter:

"Research just completed indicates the basic phenomenon back of all known types of narcosis or anesthesia.

"This is reversible coagulation of the cell colloids. This means precipitation of the material, such as is produced in eggs when they are cooked.

"The phenomenon differs from the coagulation of eggs in that it will return to its original state when the narcotic agent is removed.

"While the earlier periods of civilization did not possess the great number of narcotics known to-day, they did develop one that had the outstanding advantage of universal distribution and cheapness. This method was to strike the patient with a hammer or some other object.

"Modern practice produces narcosis by a different method, although the result is quite the same. But remarkably little is known concerning the actual cause of the phenomena.

"When the organism is heated, cooled, shocked by electricity, treated with alcohol, chloroform or ether, the changes are identical, namely, coagulation. This shows that the cause of the loss of sensibility due to heat, coldness, electricity, and drugs is one and the same phenomenon. Whenever the coagulation is too extensive or irreversible, death results.

"One thing hindering the development of new drugs has been lack of understanding of the mechanism by which they act.

"The work has led to an entirely new concept of stimulation and stimulating drugs. The division of drugs into narcotizing and stimulating groups gives the impression that differences are distinct.

"This is not the case.

"A narcotic and a stimulant are the same thing chemically. The difference arises through the changing colloidal behavior of the drug at different concentrations.

"The effect of blows was studied by jarring the nerve cells, which caused them to whiten and thicken."

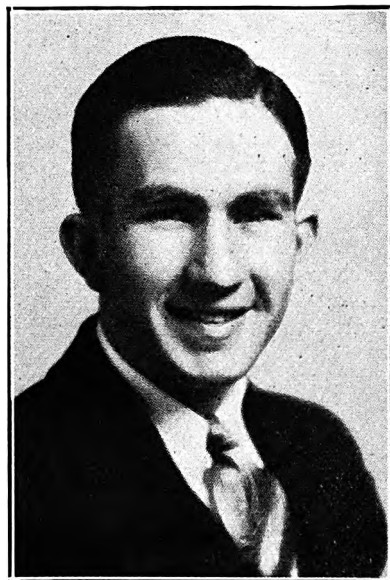
—From *Literary Digest*.

OHIO STATE BOARD OF PHARMACY

Successful candidates from Cleveland and Northern Ohio in the Pharmacy examinations held by the Board in Columbus, June 24 and June 26, include the following persons who were granted pharmacists' certificates:

Lucille G. Bickford, Edgar Cantlon, Earl T. Cook, Ralph Cullinan, Joseph Dworkin, Henry W. Gallagher, Michael F. Gayok, Ernest T. Gross, Abe Harris, Leon N. Hickernell, John B. Kalasinski, Myer L. Karner, Sister Mary Adelaide Krummert, Peter A. Nesi, Edward Paley, Emma K. Pejsa, Brooke K. Phillips, Robert M. Porter, Milton Resnick, Sister Jeanne Marie Ruhlin, Philip Saginor, Jr., Edwin H. Whittaker.

Honors for the highest grade made in the examination went to Sister Mary Adelaide, a graduate of Western Reserve University, School of Pharmacy. She attained a mark of 91%, which is a splendid record, and shows us that Sister Adelaide is still carrying on her work as faithfully and diligently as she did in her student days here at Reserve.



John Bellan

ANNUAL SCHOLARSHIP

The scholarship annually awarded by the School of Pharmacy was won this year by Mr. John Bellan of Lorain, Ohio, a graduate of the high school in that city, class of '30. This award was made after a competitive examination, participated in by three members of this year's entering class. The value of the award is \$300, which will be renewed for three successive years, upon the completion of satisfactory work. Mr. Bellan has the congratulations of the PHARMACON. We trust that he will continue the good work he has so conspicuously started.

A CONGRESSIONAL PHARMACOPOEIA?

The recommendation made by Charles Wesley Dunn that the Pharmacopoeia be compiled under government supervision to correct what he terms the unconstitutionality of the Food and Drug Act has been further defended and explained by Mr. Dunn. We are quite willing to concede to Mr. Dunn the point of unconstitutionality, but we are unwilling to accept his method of correcting the condition. Even the thought that the Pharmacopoeia be written not by the Department of Agriculture, but "by a commission authorized by Congress, appointed by the President, and including in its membership representatives of the directly interested government departments and agencies, representatives of the medical, pharmaceutical and chemical professions, and representatives of the public at large, in due balance," does not intrigue us.

We have for fifteen years or more had a tariff commission appointed by the President. This commission has done practically nothing in the way of taking the tariff out of politics. Selfish interests lobby openly to have included in this tariff bill all sorts of provisions that are not in the public interest. And in the main, those who fight hardest and pay the most get what they want.

The question before the drug trade in this case is, do we want the mild type of politics that is played in the Pharmacopoeia Convention, and where scientific glory is paramount, or do we want a general congressional revision of the Pharmacopoeia fashioned after the unscientific and unbalanced manner in which we revise our tariff bills?

Editorial from
Drug Markets—July, 1930.

ULTRAMICROSCOPE FINDS TINIEST GERMS YET SEEN—THOSE PRODUCING MULTIPLE SCLEROSIS, COMMONLY CALLED "CREEPING PARALYSIS"

Workers in the neurological laboratory of the Westminster Hospital, London, claim to have discovered the smallest disease germ ever seen by the human eye. It is one of a group known as the filterable viruses which

includes the forms of parasitic life causing infantile paralysis, sleeping sickness, measles, and smallpox.

The detail of technique which seems chiefly to be responsible for the discovery is the making of cultures in a completely sterile atmosphere. A chamber a little smaller than an egg crate is exposed to short wave lengths—ultraviolet rays—until the air it contains has been sterilized. The sterilized hands and arms of the worker are introduced into this chamber through a device which prevents contamination.

Hitherto, research with the ultramicroscope has been inconclusive because it has seemed impossible to obtain uncontaminated cultures.

Abstracted from Science News Letter.
July 19, 1930.

FARADAY CELEBRATION NEXT YEAR

Michael Faraday (1791—1867) was one of the most brilliant experimentalists that Science has ever known. His discoveries furnished the foundation for the development of magneto and dynamo machines. His researches in electrolysis are outstanding. To him we owe the terms "anode" and "cathode." The term "farad," the practical unit of electrical capacity, is named in his honor.

Since it was about a century ago that this British scientific genius was at the height of his career, it is fitting that the managers of the Royal Institution in London have issued the following memorandum explanatory of the arrangements being made for the celebration of the centenary of one of Faraday's epoch-making contributions to science:

"August 29, 1831, is the centenary of one of the great events in the history of the world. On that date, Michael Faraday, as his diary shows, wound two coils of wire on to opposite sides of a soft iron ring, connected one coil to a battery and the other to a galvanometer, and at 'make' and 'break' of the battery circuit observed deflections of the galvanometer connected in the other circuit. From this simple experiment, and the variations of it made by Faraday in succeeding trials, has grown in the past hundred years the science of electrical engineering and the great electrical industry in all its phases as we know it today. No other experiment in physical science has been more fruitful in benefit for mankind."

In Memoriam



Vincent J. Stark

Vincent J Stark, a graduate of the School of Pharmacy, class of 1928, passed away on the 28th of August, 1930. Stricken early in the year by a complication of digestive and nervous disorders, he was confined to his bed for several months before the final summons.

Mr. Stark was born in Cleveland, January 21, 1894. In 1922 he entered the drug business, later becoming the junior member of the firm of Gray and Stark, Inc., West 41st Street and Busch Avenue. Possessed with initiative ambition, he soon saw the need of further training in order to succeed in his chosen line of work, and in the School of Pharmacy demonstrated his industrious-

ness and faithfulness which later won for him professional and business success. Endowed with unusual talent for drawing, he became art editor of the University comic publication, *The Red Cat*, and, as such, won conspicuous success. His sketches and cartoons for the PHARMACON were outstanding contributions. The present cover design is a memento of his loyal efforts along various lines that made for the welfare and prestige of this school.

Mr. Stark is survived by his widow, a five year old son, his parents, and a brother. The PHARMACON extends its deepest sympathy to the bereaved family.

"The death-change comes,
Death is another life. We bow our heads
At going out, we think, and enter straight
Another golden chamber of the king's,
Larger than we leave, and lovelier.
And then in shadowy glimpses, disconnect,
The story, flower-like, closes thus its leaves.
The will of God is all in all. He makes,
Detroys, remakes, for his own pleasure, all."

The Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

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WESTERN RESERVE SCHOOL OF PHARMACY

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EDITORIALS

There are three well established years in this land of ours. The calendar year beginning with January is, of course, the regularly established year. The fiscal year beginning with July is the one recognized by our national government and many of our subsidiary governments and industrial concerns for statistical and financial statement purposes. September, generally speaking, marks the beginning of a new year in the school world and most educational activities take on a new impetus at this time.

In one very significant sense the school year marks something more than a fresh beginning in school and college activities. It marks the close of a restless season. Summer months mark a period when the quest for change and novelty is rampant. Travel, in one form or another, has become the vacation custom instead of mere "rest" from ordinary labors and occupations. From this it does not follow that those who go the farthest from home will see the most, for an understanding eye and an imaginative sense mean more than mileage. It is a wholesome thing to break the year's routine by seeking new places and new company. However, those who find the old job interesting and the home town a source of surprise will get the most good from travel. They are fortunate because they need not go far to find fresh experiences that supple-

ment the pleasant memories of vacation days.

It is obvious, then, that the end of this restless period should mark the line of cleavage between old and new years. The new start is fresher than the one we get in January. Our physical stamina is more pronounced; our mentality more highly sensitized and we, consequently, experience a strengthening of the moral fibre. The outlook is brighter; the viewpoint less beclouded—verily, the beginning of a new year.

Many pharmacists nowadays take a pessimistic view as regards the professional aspect of their calling. Because of the many diversified lines carried in the modern drug store and the relatively small demand for products that are sold over or compounded behind the prescription counter, we frequently see or hear the statement made that American pharmacy is being relegated to professional obscurity. Probably the reason most frequently given for this state of affairs is the tendency of physicians to prescribe so-called patent remedies. Instead of the medical profession being educated to the value of U.S.P. and N.F. preparations, the manufacturers are influencing the phy-

sicians to prescribe by the simple method of indicating trade-marked products.

While it cannot be denied that there are many worth while proprietary products offered to physicians and the public to-day, the multiplicity of these products has undoubtedly confused physicians and led to the exploitation of the public in a way that is as detrimental to the medical profession as to pharmacy. Because of this state of affairs we believe that there is no greater need at the present time, so far as the progress of both pharmacy and medicine are concerned, than the furtherance of such a scheme as outlined by the chairman of the revision committee at the recent pharmacopoeial convention. The plan, as outlined, would more thoroughly acquaint both professions with "the facts of medical interest, such as titles, degrees of activity, incompatibility, solubility, dosage, and even possible prescription combinations." These facts would be set forth in a series of brief monthly articles to appear in the leading medical and pharmaceutical journals under the caption "The Pharmacopoeia." If this plan goes through we believe it will not only become an enlightening factor of itself, but will hasten the day when medical colleges will lengthen their courses in pharmacy and materia medica. Both steps, we are sure, working separately or together, will greatly improve a condition of affairs now so injurious to both medicine and pharmacy.

All of us agree that so far as professional aspects are concerned, Pharmacy and Medicine are fundamen-

PHARMACEUTICAL EXPEDIENCY

tally allied. Wholehearted cooperation on the part of each is essential to the welfare of both. Each of the professions lays many of its troubles at the door of the other. This does not generally augment toward better feeling and leads us to sound a note of warning to those of our own calling, who, in their zealous efforts to always maintain their rights and prerogatives, frequently arouse animosities and defeat their own good intentions and purposes. If it is desirable to spread the gospel of the pharmacopoeia among the heathen followers of Hippocrates, then we

must adopt the method of the true missionary and use soft words rather than spears.

In other words, we believe that a serious set-back to a common cause is bound to result when enmities are put into motion as they were at the recent pharmacopoeial convention over the resolution to charge the medical members with deciding therapeutic usefulness. While we believe the compromise was fair and safe, nevertheless, the affair was an unfortunate one and we hope that in the future such occasions will arise only when the diplomats of our profession are within sight and hearing.

State Boards of Pharmacy are frequently criticised for their failure to enforce statutes

MORE POWER TO BOARDS OF PHARMACY pertaining to the practice of pharmacy. Every one who has observed the workings of law enforcement knows that its efficiency depends upon the willingness to report violations and serve as witnesses by some goodly portion of the general public. Now it is to be presumed that the portion of the public most cognizant of pharmacy law violation is that portion represented by pharmacists themselves. Yet, how many of our good pharmacists are to be found hot-footing it to a member of the State Board with assurances that they will come forward as witnesses if some violator is brought to trial?

In view of these difficulties, we wish to congratulate our own Ohio Board in its successful crusade against registered pharmacists who have entered pleas of guilty to charges of felony or have been convicted thereof.

In the most recent case, the right of the Board to renew the certificate of a pharmacist who had conspired to violate the National Prohibition Act was upheld by the Ohio Supreme Court. In view of this decision by the highest court in the State giving the Board broad discretionary powers in the type of case brought before it, we trust that the Board will not hesitate to attempt enforcement along other lines, such as sale of "drugs" from places of business other than those designated by law. The Board should forget that Ohio's lower courts thought that our pharmacy laws "didn't mean a thing."

Ever since the United States government was established some pharmacists have been in its employ in one way or another. In the Army and Navy the pharmacists are picked from the enlisted personnel—usually from those who have practiced pharmacy in some form while in civil life. Pharmacists are now employed by the Public Health Service and the Prohibition and Narcotic Bureaus of the Treasury Department. The Veteran's Administration, not subsidiary to any of the major administrative departments, also employs pharmacists. Except for the Army and Navy all pharmacists have recently entered the government employ through the Civil Service and have been rated by the Personnel Classification Board as civilian employees in the *Sub-Professional Classification*. This rating has always been a thorn in the side of pharmacists and, so long as it existed, was always bound to pull the professional status of pharmacy down to a level with other sub-professional vocations.

Finally, during the current year, Congress enacted the Parker Bill into law with the approval of the President. Under the provisions of this law, pharmacists of the Public Health Service are entitled to commissioned rank. A similar movement has been started in the Veteran's Administration and all indications point to favorable legislation along the same line in the near future. These accomplishments, along with recent assurances from the Personnel Classification Board that Pharmacy will be placed in the Professional and Scientific Service Division, indicate that progress is being made in the advancement of professional pharmacy.

In the Army, pharmacists have always met with much antagonism when they have attempted to establish a Pharmacy Corps. The ranking medical officers have invariably been opposed. We are reliably informed by a member of the American Legion, who saw ambulance service within the army medical department during the World War, that the

editorial article under the caption: "The Unjustifiable Army System of Dispensing," appearing in the August, 1930, issue of the *Journal of the American Pharmaceutical Association*, aptly describes similar situations, except for details, occurring during his period of service.

No doubt such observations account for the endorsement of the Pharmacy Corps by the American Legion and the Veterans of Foreign Wars. With the aid of these agencies and persistent effort on the part of organized pharmacy the army can, and will, be brought into line with the other branches of Uncle Sam's government.

Heretofore, the major efforts against disease in this country have been directed by the State medical schools and **A NATIONAL HEALTH INSTITUTE** endowed institutions. As a consequence, the efforts were more or less scattering and overlapping for the lack of a centralized clearing house as well as a directing agency. The recent enactment of the Ransdell Bill into law should prove to be a remedy for this condition of affairs. By its provisions the United States Treasury Department, through the Hygienic Laboratory, will bring together for this work "under one directing head the very ablest experts in the sciences of chemistry, pharmacy, dentistry, medicine, surgery, physics, biology, bacteriology and pharmacology" for the purpose of inquiring into the cause, prevention and cure of disease.

One of the most noticeable advances in the progress of pharmacy during the last decade has occurred in the field of hospital pharmacy. **HOSPITAL PHARMACY** As proof of this statement we need go no further than the limits of our own city of Cleveland. For the most part, the hospitals of Cleveland gave much less attention to the needs of their pharmacies or dispensaries ten years ago than they do to-day. Some of these advances have been outstanding ones, and it is our intention to publish some of the details connected with them.

In this issue will be found an article dealing with one of the major accomplishments in Cleveland Hospital Pharmacy—an accomplishment due, in no small degree, to the efforts of Mr. Karl Y. Streng, a graduate of this school, and now the chief pharmacist and assistant superintendent of City Hospital.

In a forthcoming issue we hope to present an article on the new pharmacy of the University hospitals, now nearing completion.

There seems to be quite a universal misunderstanding of the terms "patent" and "proprietary" in regard to other than official medicines. Both medical and pharmaceutical writers frequently confuse these terms, or at least they fail to accord to either term its true signification. At the present time, relatively few medicinal products are protected by patent. Insofar as it is only the process of manufacture that can be protected by a patent, the advantages accruing therefrom are rather limited. In reality patent remedies are not secret, or at least the process for making them, since the patent specifications are open to the public in the Federal patent office.

The proprietary rights in private formula medicinal preparations are best protected by trademarking the name or design which then becomes the "trademark" or "brand," and it is this which legally identifies the product, thereby enabling the owner to reap the rewards of extensive advertising. Hence, it becomes evident that while all patent preparations are proprietaries, not all of the latter are patented. It is for this reason that the terms "proprietary" or "trademarked" should, generally speaking, take the place of the term "patent."

At the present time it is probable that the term "patent-medicine," in the minds of most people, connotes "unethical proprietary," that is, a preparation so labeled that its true composition is hidden. However, such a preparation is best identified by the term "nostrum."

Under the caption "Drug Store Jokes are No Laughing Matter," a well known Eastern Drug Syndicate is widely publishing a **NO LAUGHING MATTER** forceful advertisement in order "to put the independent druggist in the proper light before the public." It bewails the fact that such songs as: "and they call it a drug store" and "What! You don't sell plows? What kind of a drug store is this?" are entirely out of order and beseeches the drug trade to end the "sharpened shafts of sarcasm and so-called humor" by communicating with theatre managers, newspaper editors and others who sanction "this destructive propaganda."

We seriously question the wisdom of this movement although we do admire the good intentions of its originators. If the great American public feels like smiling when a joke "goes home," then smile it will. We are not so sure but that the average drug store gives good cause for some of these jokes and if it does, the situation can never be remedied by a "squeal." A certain prestige has always attached itself to the term "drug store" or "pharmacy." We presume that it is the breaking down of this prestige that has much to do with the origin and "funny side" of these jokes. Pharmacy, itself, has a duty to perform in the matter but we believe that duty is of another order. Let drug stores be drug stores; there are plenty of allied side-lines connected in some way with the public health without going too far afield into dry-goods, hardware, jewelry, luncheons, toys and general notions of all kinds, ad infinitum.

Drug Stores have rightly taken pride in their ability to function as stations for disseminating public information of all kinds. The general public has come to look upon them as places where an intelligent personnel will be ready and willing to give not only general information but also information of a technical or scientific character.

WE ARE NOT SO SURE ABOUT IT

This very thing has been one of the foundation stones in the wall of drug store prestige. Largely because of this, the sale of books, magazines, and newspapers has long been looked upon as a legitimate branch of the drug business. To our way of thinking, however, it does not mean that a drug store should be given over mainly to this type of business.

At a recent meeting of the American Booksellers Association, its president said among other things: "If the bookseller cannot compete with the drug store, he will have to open a drug store himself." In commenting upon this statement, the editor of a well known drug journal remarks: "As we see it, the drug store may continue to handle books as a side-line, but the sale of drugs can never become a side-line to the sale of books." We are not so sure that this smug statement rests upon a firm foundation of fact. There are, unquestionably, many drug stores existing to-day where the drug business is not the primary consideration. It cannot be, because there is little attempt made to do a drug business. Many drug stores exist for other purposes—and we are not insinuating that they exist, always, for illegitimate business. Again we rise to remark that the prestige attached to the terms "drugstore" and "pharmacy" is not to be overlooked. Let all pharmacists, everywhere, start in now to save that prestige.

It is becoming more and more apparent that the conventional chain-store idea has reached a stage where everything is not all clear-sailing, as it was a few years back. There are many factors, of course, contributing to this state of affairs, not the least of which is the formation of the so-called voluntary chains. These are combinations of wholesalers and retailers that have adopted most of the ideas which were advantageous to the original chains and rejected those which have proved disadvantageous. Individual ownership is retained. Each store owner enjoys "homerule" and preserves his practical independence while at the same time becoming heir to all the facts and successful ideas that may be gathered from all corners

of the commercial world by a centralized office. By this system the advantages of mass buying accrue to the individual dealer the same as to the owner of a chain.

In the last four years more than five hundred such chains have come into being. Many of them, like the Independent Grocers' Alliance, have spread out to all parts of the nation and are proving to be the salvation of the independent dealer. One voluntary drug chain is spending about a million dollars annually in national advertising and broadcasting in order to acquaint the public with the new idea.

The independent druggist who finds himself hard pressed by chain-store competition should investigate thoroughly the claimed advantages of the voluntary chains. They may prove to be the salvation of many neighborhood stores in the future.

The idea of setting aside some period of time during the year for the purpose of carrying on an intensified sales campaign within some particular merchandising field has become fairly well established. It has the advantage of utilizing the more pronounced impression that a "big splash" makes, in comparison with small individual efforts, along a given line. We venture to say that the massiveness of the thing affects the sub-conscious mind of the public to a greater extent. No exception, it seems, can be taken to this method; it is entirely within the field of ethical publicity.

However, when periods of time are, by general consent, set aside for the furtherance of charitable or idealistic motives that a large portion of the public approves and then are encroached upon by those who seek to profit by their own merchandising schemes, it is quite a different matter. Every imposition of this kind naturally leads the public to become more and more suspicious of any altruistic motive that may have originated such a movement.

To what extent pharmacy has been benefited in its efforts to truly progress since "Pharmacy Week" became an annual affair cannot be definitely determined. Perhaps it is too soon. Unquestionably there have been some commercial benefits derived and in

numerous instances professional pharmacy has been benefited. Where merchandising methods were employed to the exclusion of all else, the cause of pharmacy may not have been helped. Much depends upon the character of both the merchandise and the merchandiser.

On the other hand, we do believe that "Pharmacy Week" has been mischievous to some extent. Sometimes it has cheapened the calling by the shiftlessness of its methods. Its displays along the professional line often remind one of a high school manual arts and science exhibition. The public expects dignity in a professional practice. What is done should be done well but not overdone. Once the public gets the point of view that the effort is for the purpose of giving "front," as little will be accomplished for professional pharmacy as there will be for commercial pharmacy if the point of view gives evidence of exploitation, due to high-powered sales methods.

The PHARMACON congratulates Mr. H. E. Benfield of Cleveland upon the resolution sponsored by him and presented by the Northern Ohio Druggists Association to the National Association of Retail Druggists, which latter body passed it at its recent convention at Atlantic City. The President of the National Association of Retail Druggists has an opportunity to select five men who may be able to make an outstanding contribution to pharmacy. If these men should happen to be members of the American Pharmaceutical Association, too, and if Mr. Benfield be selected as Chairman of the Committee, so much the better.

Pharmacy itself must become acquainted with its needs before it can receive the funds to carry on research, to build and maintain buildings, and to function as it should. This Committee will have a man's size job on its hands, and, if it does it well, we shall doubtless see a permanent committee. To Mr. H. E. Benfield goes the credit for a real idea. The resolution follows:

"Whereas, many large fortunes have been built for which sales in retail drug stores have been very largely responsible and the owners of these fortunes have never had

their attention called to the needs of pharmacy at a time when they are planning the disposition of their wealth, with the result that the amounts left to pharmacy are insignificant when compared with those left for medical education and to other professions, and

"Whereas, the needs of the American Institute of Pharmacy at Washington, also the need for endowments of our Colleges and Departments of Pharmacy in the various Universities for buildings, faculty, equipment and for research in pharmacy are very great, and

"Whereas, such endowment would advance the cause of true pharmacy and place it upon a social level where it would command the respect it deserves, and

"Whereas, the time is now ripe when a plan should be evolved that would seek to explain in a dignified manner that means made in pharmacy should, in some measure, be returned to pharmacy,

"Therefore, be it resolved by the National Association of Retail Druggists that its President appoint a committee of five whose duties it shall be to arrange a program, prepare a slogan, and to acquaint our membership with the needs of Pharmacy and plan so that they may make contacts with the wealthy men of their respective communities to the end that such men may be persuaded to endow education and research in Pharmacy."

As a publication devoted to the cause, it becomes our duty to defend professional pharmacy against any encroachment upon its tenets and ideals. As regards matters of public welfare, and especially the public health, professional pharmacy belongs in the same category as medicine, dentistry and nursing. And we take issue at all times with any force which would ignore the spirit of the law and the principles of ethical practice in either professional or commercial pharmacy.

Recently the president of a well known trade association dealing in proprietary medicinal products read a paper before the association's annual convention in which he declared that legislation regulating the practice of medicine and pharmacy should not

affect or regulate the sale of such medicines as are intended for delivery to the consumer without the intervention of a prescription. So long as human nature is as it is, we believe this statement is unjustified. Too many trade associations are interested only in profits and economies. Being commercial, this is natural. It is true that many proprietary medicine manufacturers do profoundly concern themselves with the cure, mitigation and prevention of disease; and they, too, are justly entitled to a profit.

In these days of impetuous competition, however, there needs to be an intervening check to protect the public health—the most precious heritage of a nation. For this reason there is need of legislation which will safeguard this birthright, for, of all the commodities in which man deals, none should be handled with greater care, skill and intelligence than those with which the physician and pharmacist are especially concerned.

What is the correct way for a pharmacist to make a percentage solution for medicinal purposes? Much ink has

PERCENTAGE SOLUTIONS

been spilled in the discussion of this and still there seems to be no general agreement. In its September issue *The Druggists Circular* thoroughly elucidates the problem. We are somewhat surprised, however, at some of the answers of State Board Secretaries, with regard to the attitudes their Boards take toward the particular problem in hand, viz., the making of one fluid ounce of a ten per cent solution of potassium bromide. One Secretary says: "percentage solutions are made by weight in this part of the country." Another says his Board "considers 50.2 grains of the salt dissolved in 451.84 grains of water: or 50.12 grains dissolved in 451.15 grains: or 50 grains dissolved in 450 grains, as correct answers to the problem." But here comes the "Ne plus ultra" in the reply of one other Secretary: "We think we know how to figure this correctly, but in view of the fact that there have been so many differences in opinion, we have never allowed this question to appear in our papers."

We are wondering why the Circular fails to mention the metric weight-volume

method in its discussion. True, it is not a strict percentage matter from the point of view that the Circular takes when it discusses grains in minims. But, according to our dictionary definition of "per cent" we are not so sure that "per cent" on a weight-volume basis is less logical than when on a weight basis alone, or on a volume basis alone, when the metric system is employed, i.e., grams per hundred cubic centimeters, or a W/V per cent. Certainly, ignorance of the metric system can excuse no pharmacist for failure to use it. The method is both simple and reasonable. Simple, because it is based on the decimal system—the mere shifting of a decimal point can save much effort and time. Reasonable, because both physician and pharmacist can so readily determine the weight of substance in any unit volume of solution, and, after all, the physician is primarily concerned in knowing how much medication will be carried into the system of the patient by a given volume of solution.

Furthermore, in the metric W/V system, we have a definite procedure. There is no confusion and misunderstanding, such as is likely to arise when the apothecary and avoirdupois systems are employed. A very large per cent of pharmacists do use the weight-volume method in the apothecary system for making percentage solutions. We are inclined to the thought that some of those Secretaries had their fingers crossed when they wrote that, in their neck-o-the-woods, percentage solutions were made strictly by weight.

As regards accuracy, there is very little discrepancy between the metric W/V method and the apothecary W/V method. And neither one of these methods introduces such a large per cent of error for the lower range percentage solutions—10 per cent and under—as is recognized by the U.S.P. in dosage equivalents. That is, the U.S.P. ignores an error of about 8 per cent as between grains and milligrams, minims and cubic centimeters, and fluid drams and cubic centimeters, when it gives equivalent doses for various official substances. A 10 per cent metric W/V solution of potassium bromide has about a 7 per cent error, under strength, compared with a 10 per cent W/W solution. In the lower per cent solutions, the error, of course, is much less.

The after-effects, consequences, and serious complications following the stock-market crash of a year ago **SEQUELAE** could not fail to affect the drug business throughout the current year, the same as every other line of industrial activity. The extravagances and riotous living, more or less participated in by all classes of society when prosperity is on the wing, had their usual results. He who dances must pay the piper. However, authorities on financial matters tell us that we shall soon be through the valley of shadows; that the hesitation and doubt now so prevalent in the business world will presently be followed by optimism and enthusiasm. Just as the deepest darkness precedes the dawn, the commercial world will soon find itself traveling the high road among the peaks. We trust that the optimists know their business.

PHARMACY FIRE BRIGADE GETS INTO ACTION

What might have been a very serious matter was ably coped with by Robert Stockhaus, and former fire-fighter Harry Valway, who once more put into practice some of the tricks he learned as a member of the Cleveland Fire Department.

Early in the past summer, two workmen in the basement of the Household Administration Building were cleaning an electric motor with gasoline when the fumes were ignited by a small gas heater. Both were severely and painfully burned, and, after first-aid was rendered by Stockhaus, they were taken to a hospital. Valway soon quenched the flames which were just beginning to wrap their tongues about the beams of the structure. That he did a good job is evidenced by the fact that we still have the Household Administration headquarters as a neighbor.

CINCHONA ANNIVERSARY

In celebration of the three-hundredth anniversary of the first recognized use of Cinchona, ceremonies will be held at St. Louis on Friday and Saturday, October 31 and November 1, 1930, under the auspices of the Missouri Botanical Garden of that city. Besides an exhibition of books, pictures, crude materials, and drugs pertaining to Cinchona,

addresses will be given covering everything in relation to the drug. Of special interest to us at Western Reserve University is the fact that Dr. Torald Sollmann of the University is to talk on "The Cinchona Alkaloids in Medical Science."

COLLOIDAL IODINE

Preparations of colloidal iodine have recently been found to be of great value to poultry-raisers in combating intestinal worms and coccidiosis. The latter, one of the most serious and widely spread diseases of young chicks, is caused by protozoal organisms called coccidia. Birds affected fail to develop properly, appear dull with drooping wings and pale combs, ruffled feathers, and frequently bloody droppings, and, unless immediate effective measures are taken, die in the majority of cases.

Chicks contract coccidiosis by picking up the infective state (the incubated oöcyst) which has been passed previously by infected birds. To prevent the daily ingestion of numerous oöcysts by the chicks appears to be the most effective method of controlling the disease, and iodine, in the form of Iodine Suspensoid Merck (Colloidal Iodine Chandler), offers a means which can be used in a practical and economic manner to destroy coccidial oöcysts. Before eggs are incubated, preventive treatment should begin to kill all oöcysts of coccidia which may be on the shells, and, as further destruction to the parasites, brooder houses should be scrubbed with a solution of the material at regular intervals. It has been found also that the feeding of small amounts of Colloidal Iodine Chandler during outbreaks of the disease is of much value as the iodine aids the birds to combat the effects of the poisonous substances excreted by the coccidia.

Another colloidal iodine product, Iodine Vermicide Merck, similar to Iodine Suspensoid, is prepared especially for internal administration with a special dosing appliance. Iodine Vermicide Merck is used chiefly for the eradication of intestinal parasitic worms, it is also apparently of great value in "range paralysis" when used in combination with the Suspensoid.

(Further detailed information on the subject may be obtained by communicating with Merck and Company.)

WILL ALFALFA RID THE WORLD OF MALARIA?

Ever since it became known that malarial fever is spread by mosquitoes, extended observations have gone on all over the world in an effort to find some effective means of control. Some of the investigations have developed interesting theories, supported by evidences brought forth by able and careful workers.

One of the most plausible theories of malarial control was recently outlined in an article by Dr. T. Krysto, former Governor-General of Western Siberia and Senior Specialist in the Russian Department of Agriculture. With the permission of the copyright owners, we herewith present some condensed statements from the article, which appeared in the *Scientific American*, April, 1930:

"It is known that mosquitoes feed on the juice of plants; the males feed exclusively thus, and the females feed partly on the juice of plants and partly on the blood of animals and men. I found that when *Anopheles*, the malarial fever mosquito, feeds on leguminous plants, their juice neutralizes the noxiousness of the mosquito. It can no longer spread malarial fever.

A detailed description of my studies in this respect is here impossible. But I had occasion to travel widely in both Americas, Europe, and Asia, and everywhere I found striking evidence that leguminous plants—alfalfa, clover, beans—prevent malaria. These plants have in common a substance called coumarine, and this substance seems to play a rôle in the insects comparable to that which quinine plays in man.

The prominent Yale scientist d'Herelle says in his book, "Immunity in Natural Infectious Disease," "The greater portion of the Argentine Republic is completely free of malaria, in spite of the fact that the anopheline carriers abound in these regions . . ." Further, Dr. d'Herelle states, "We have seen that in all the free regions there is a wild plant called by the natives 'trebol de olor' (scented clover). Flowering takes place during the critical period of malaria, that is, from the beginning of summer to the end of autumn. The highly scented blossoms are continually frequented by insects of many kinds, and particularly by *Anophelines*, which feed upon the juice which, like all

plants of the genus, contains a glucoside, coumarine. This plant is not present in malarial districts."

On another page Dr. d'Herelle comments on the disappearance of malaria from certain islands of Zealand and from northern provinces of Holland. This disappearance coincided with the accidental introduction of leguminous plants.

Again, I find in a pamphlet of Sir William Willcocks, engineer of Cairo, Egypt: "Cultivated Egypt is mainly immune to malaria, and cultivated Egypt means Egypt with all its wealth of clovers, leguminous plants, wild melilotus, and trigonella. But where tracts have been planted with fruits or other crops instead of clover, there malaria devastates the population as it does in Palestine and Greece, where there are few leguminous crops and in those parts of India, where gram, a kind of chick-pea, is not cultivated."

You see that all three of us came independently to the same conclusion. In all these cases the measures against malaria were applied *unconsciously*. We can now do it consciously, introducing leguminous plants with the intention of disinfecting the malarial mosquito.

This is the first part of my plan. The second part consists of replacing mosquitoes which suck the blood of human beings by mosquitoes which suck the blood only of animals.

In the Comtes Rendus de l'Académie des Sciences, Paris, France, there are some very interesting articles by the French naturalist, J. Legendre. As he states, there are some mosquitoes that do not sting men. There are also some mosquitoes whose larvae eat the larvae of another mosquito, and in this way exterminate them from a given locality. M. Legendre has discovered in Brittany a mosquito—he calls it *Breton culex*—which crowds out another breed of *Culex* mosquitoes, and at the same time does not sting men but only animals.

M. Legendre transported eggs of *Breton culex* to a place where swarms of another mosquito annoyed the people. A year later he found only *Breton culex* in that locality, which did not sting human beings. M. Legendre continued his observations five years later and found that *Breton culex* had held its own, and continued to be "man-hating."

Again, a proprietor of a farm asked M. Legendre to free him from annoying mosquitoes. M. Legendre introduced his *Breton culex*, and in one month they crowded out the aboriginal mosquitoes.

Here then is our plan. The first part of it—the use of leguminous plants—is a novelty, but the second part is simply an adaptation of the well-known procedure of using one insect to fight another.

So let us take leguminous plants and friendly mosquitoes and start our work of liberation. We may start our work on the island of Cuba. I choose it for many reasons, the main one having to do with the acclimatization of the mosquitoes themselves. Cuba could be followed by Paraguay, Brazil, and Central America.

Malaria is a dreadful, world-wide disease, costing us countless lives and billions of dollars. I hope that among Americans will be found someone who can lend a helping hand to this enterprise."

NOTE: The *Scientific American* quotes Professor David Starr Jordan, former head of Stanford University, as follows: "Dr. Krysto's suggestions may prove of tremendous worth to the world."

TO ALL THESE QUESTIONS THE ANSWER IS "NO!"

Will a stocking wrapped around the neck at night prevent sore throat?

Is sewer gas the means of spreading disease?

Is it safe to delay a minute in securing antitoxin for a case of diphtheria?

Does vaccination for smallpox cause syphilis?

Is it wise to expose children to the usual contagious diseases so they can have them over with?

Will amber beads around baby's neck prevent croup?

Is it necessary to remove food immediately from a can after it is opened to prevent spoilage?

Will a poultice draw poison out of a wound?

Is there any way to get typhoid fever other than by eating or drinking the germs in the body wastes of some person who has or who carries the disease?

Even though one feels "as fit as a fiddle" should he neglect his annual physical examination?

Will dog's hairs applied to a bite prevent rabies?

Is it safe to diagnose your own ailments and treat yourself with patent medicine?

Should the fear of "the knife" prevent any one from having an early operation, if cancer is suspected?

Will wearing an iron finger ring or carrying a buckeye in the pocket prevent rheumatism?

Now that toxin-antitoxin has been perfected, is any case of diphtheria necessary?

Do you need to allow flies or mosquitoes to breed on your property?

Should the "conscientious objectors" prevent school and health authorities from requiring that all children be vaccinated?

Is there any truth in the belief that a bag of asafetida tied around the neck will prevent contagion?

Is there any other known cure for rabies (hydrophobia) than the Pasteur treatment?

Is there any way to detect, in their early stages, diseases of the heart, kidneys and other organs except by thorough examination by a careful physician?

Is a toothbrush of as much value as proper diet in childhood in preventing tooth decay?

—*Canadian Social Hygiene Council.*

ENGLISH HUMOR

An Englishman, while attending a banquet in America, was very much impressed by the following toast, "Here's to the happiest moments of my life, when I was held in the arms of another man's wife—My Mother."

The Englishman, upon returning to England, was elected Toastmaster at a banquet, and decided to give the clever toast he had heard in America. He arose and said, "Ere's to the 'appiest moments of my life, when I was 'eld in the harms of another man's wife—er—er—ah I forget who the bally woman was."

Two microbes sat on a pantry shelf,

And watched with expression pained
The milkman's stunts; both said at once
"Our relations are getting strained."

ALUMNAE

Orren Leroy Brooks; B. S. (1925), who was pharmacist and chief of the laboratory at Lake County Memorial Hospital, Painesville, Ohio, for three and one-half years after leaving Western Reserve University, writes us from Sitka, Alaska. He is in the Railway Mail Service of the United States Government at present. He claims he knows the name of every post-office in Alaska, Washington, and Idaho, except one. We are going to look up that one in our new encyclopaedia, and send it to him. He has made nine trips between Seattle and Sitka on the S. S. Queen, but he will go back on the railroad soon.

Last, but not least, we must let you in on a little secret. Orren was married last April to Miss Mary Margaret Meigs, a graduate nurse of St. Luke's Hospital. He has our heartiest congratulations. His address is 217 West Boston Street, Seattle, Washington, where he will be glad to hear from all of his old friends.

Miss Lucille G. Bickford, editor of the PHARMACON last year, is now Pharmacist at the White Cross Hospital, Columbus, Ohio. The PHARMACON takes this opportunity to congratulate Miss Bickford, and also hopes that she may find a few moments to take pen in hand and once more express her views for our readers.

Mr. Albert P. Metzger, class of 1921, was recently married to Miss Clara Gangard of Miami, Florida. A honeymoon sojourn in Cuba followed.

Al's brothers, Henry and Jake, spent their summer vacations motoring and fishing in Canada.

PHI DELTA CHI NEWS

Another summer has been brought to a close with all its joys and tragedies now only a memory. Many things have happened that must never be forgotten, as well as others that we will do our best to forget. Everyone is now ready to plunge into deep study, and, despite the trials and tribulations of past years, we are looking forward to an enjoyable and worth-while season.

The summer months began with a "bang," when Henry Gallagher smashed his car and lost some of his nervous temperament while on the way to Columbus for the State Board of Pharmacy examination. However, he was unhurt and emerged victorious from the examination along with Earl Cook, Edgar Cantlon, and Mike Gayok. We extend to these brothers hearty congratulations and best wishes. Henry will be able to make enough money now to buy a new car, and he should, because it is mighty hard for a fat man to do much walking.

Evidently Gallagher's crash and the fact that the boys passed the Board examination were not enough accidents for one season, for Earl Cook and Alvin Kuttler returned from their vacation after a session in the hospital. The boys crashed head-on with a car, near Buffalo, and suffered many cuts and bruises. Both had a total of about thirty stitches in their faces. Such is luck.

Whether to call the following items news of joy or sorrow, we do not know. Nevertheless, they were joys for those concerned. On June the seventeenth, Brother Rudolph A. Schreiner took the matrimonial leap and was married to Miss Ruth Solt of this city. Brother Baldinger, who was married in August, 1929, and had Brother Schreiner act as best man for the ceremony, stood for Schreiner. Mrs. Baldinger was the bride's attendant. Schreiner is employed by the Standard Drug Company.

On September the sixth, Brother Richard Koch took as his bride Miss Irene Orrill of Detroit. Brother Kumpf acted as best man, and the bride was attended by Miss Virginia Hanlon. Probably this situation will be reversed next September. Brother Koch is connected with the Cleveland Clinic, he is employed in the Pharmacy. The couple reside at 1916 East 93rd Street. Congrats to both men.

The Chapter House was open the entire summer, and was completely occupied. Brothers Sanger and Assenheimer of Xi, Brothers Koch, Kessler, Gayok, Miller, Lautenschlager, and Armstrong spent most of the time there. Brothers Grimm and Stafford were short-time guests from Xi.

ALPHA ZETA OMEGA NEWS

Alpha Zeta Omega Fraternity started its tenth year with the tenth Annual Convention, which was held in Cleveland, June 30 to July 2, inclusive. By a unanimous decision of fraters from all our chapters, it was decided that the convention at Cleveland was the greatest ever held. This was due largely to the work of Alfred Baskind, who headed the committee which included Milford Harris, Joseph Dworkin, Joseph Eisenberg, Norman Weintraub, and Roy Scott.

The convention was well planned so that every minute of each day was occupied. On Sunday evening a get-together party was held to acquaint the out-of-towners with the young ladies chosen to attend the affairs in their company. On Monday afternoon an official meeting was scheduled, and the business of the year was discussed. Monday night was greeted with a sport dance at the Willowick Country Club, and, Oh! what a time!

Tuesday morning found all the fraters and their better halves eagerly waiting aboard ship to sail for Cedar Point. So, at 8:30 A. M. a whistle sounded, and we were off. After indulging in a few bridge rounds, and dancing to the music aboard the boat, we landed in Cedar Point. We then ate lunch, and, being as warm as it was, everybody was soon in the water, swimming, taking snapshots, and having a wonderful time.

At 5:00 P. M. we left for Cleveland, arriving at 8:30 P. M. All the boys hurried to get their girls home and get back to the hotel for the formal stag smoker, (perfectly respectable) at which affair we were honored by having present Dr. H. V. Army, Dean Edward Spease, and Mr. William Hosler.

Wednesday morning a swimming party was planned for the crowd at the Azoan Cottage at 237th and Lake Shore Boulevard. In the afternoon the last official meeting was held, and election of officers took place. Milford Harris of our chapter was re-elected Signare, and Roy Scott holds the office of Deputy.

Wednesday night everyone attended the last affair which was the Grand Ball at the Hotel Winton. So ended the Tenth Annual Convention of Alpha Zeta Omega Fraternity.

At the last election of officers of Theta Chapter, the following were elected: Joseph

Eisenberg, Directorum, Max B. Lessowitz, Signare, and Saul Eisenberg, Excheque.

Our write-up seems incomplete unless at least one of the boys gets married so that we may include his name in the PHARMACON. We take pleasure in announcing the marriage of Joe Silby to Marie Krasny which took place at the Chamber of Commerce, Tuesday, September 9.

The boys who were at school last year enjoyed the summer immensely with swimming parties, corn roasts, and other doings held at the Azoan Cottage.

For the coming year, we plan on successful pledging and wise increase of membership.

KAPPA PSI NEWS

Members of Kappa Psi found quite a transformation when they returned to their Chapter House for the year. Extensive repair work had made quite a big improvement about the premises. New paper graced the walls of the entire first floor and several bedrooms; floors were scraped and varnished; wood-work refinished; a combination tile bath, and two wash stands installed.

All that has been done marks only the start of a movement to make the comforts of a "frat" house outrival those of home, as the Building Committee intends adding to the work each year.

With twelve actives in School, the Chapter House in the best shape ever, and the serving of meals already started, Kappa Psi has begun what promises to be one of its best years on the Reserve campus. Eleven of the actives: Alex Celke, Robert Fitch, Don Kaufhold, Mike Lauria, Russell McArtor, John Obester, Weldon Rehburg, Steve Sabo, Karl Schweickardt, Harry Valway, and Win Webb, were with us when school closed in June, and the twelfth, George Suntala, has returned for his junior year after remaining out of school during 1929-1930.

The running of a table marks our initial attempt along such lines. With a fully-equipped kitchen and dining room, sufficient table room is available to serve between twenty-five and thirty-five persons at one time. For the present, five noon meals are being put on, but it is the hope of the Table

Committee to arrange later for the serving of other meals. Donald Kaufhold is our first steward, and, according to him, he has several tricks up his sleeve which will make the venture a profitable one.

Special mention must be accorded the Registration Smoker, the night of September 22nd. About sixty attended the affair, including faculty, alumni, actives, and pledges. The faculty was well-represented by Dean Edward Spease, Professor F. J. Bacon, Professor Neil T. Chamberlin, Mr. Leroy D. Edwards, and Mr. Robert Stockhaus. Evidently cards sent to the alumni announcing the smoker did a world of good, for we were honored by the presence of Brothers Jewell, Hickernell, Guess, Young, Porter, Dickhaut, Palechek, Walters, Streng, Smith, Blakeway, Neely, and Nagy. Quite an attendance, we think! And what a time we did have! You may imagine for yourselves that things were pretty lively when you glance at the names just given. Plenty of good talkers in the list, and all took advantage. This marks a splendid start for the year, and we intend following up with other efforts to keep the ball rolling.

Incidentally, Brother Streng let us in on some extremely good news the night of the smoker. He has been promoted to assistant superintendent of City Hospital, and we feel mighty proud of him, hereby extending our congratulations. He will continue also as pharmacist in the same institution.

It was also learned that Brother Young of Kent is now associated with Brother Dickhaut of Berea.

During the past summer Brother Robert Stockhaus completed the requirements for his Master's degree, which will be conferred next June.

Brother James S. Neely has returned to school once more, this time in the role of an assistant in the Chemistry Department. "Jim" is working toward his Master's.

Congratulations are not out of order in the least for Brothers McArtor and Fitch, who were awarded the Junior and Senior Scholarships, respectively.

If you happen to be around Ninth and Prospect, drop in at Marshall's, where you'll find Brother Mel Aldrich holding down the position of assistant manager.

Brother Ralph Blakeway of the Tarr Drug Co. is becoming quite expert at the newly-adopted, national pastime. Need we

explain that this is "minny" golf? Watch the Danceland course about 11:30 P. M. any night after Ralph closes the store, and you may be able to pick up a few of the fine points.

KAPPA EPSILON

This year, Eta chapter resumed work at school with five active members. Lucille Bickford graduated last June, and Ethel Kolosvary, a pledge, is not continuing her work in Pharmacy for the present.

Carrie McDowell entertained the Alumnae chapter and active members at her home, July the eleventh.

Lucille Bickford, our former president, is now employed as pharmacist at White Cross Hospital in Columbus. We wish her much success in her new venture.

Mrs. Lyle Matheson (Ruth Pirson) is the mother of a baby boy born in June.

Emma Pejsa was graduated in June from the University of Michigan with a bachelor's degree.

Ruth Johns is back at school taking a few courses in preparation for entrance into medical school.

Marie Hoefer spent the summer acquiring pharmaceutical experience at Miller's Drug Store, Clifton and W. 117 St., and then toured the eastern states immediately before the opening of school.

Bertha Grosser reported that there was great swimming at Sandusky Bay, where she spent all the time when she was not working.

Ruth Kotershall attended summer school at W. R. U.

Wanda Baygrowitz had a grand time at Chippewa Lake, where she rented a cottage during the summer.

DRUG STORE HUMOR IN ENGLAND

Probably there is no place of business, the world over, where one encounters more unconscious humor than in the drug store. Every practicing pharmacist of long experience in this country has a few favorite stories that recount actual episodes, or are based on facts suggested by the vagaries of the general public. That this is the case

in the English speaking world, at least, is indicated in the following paragraph by Mildred Overend in *The Pharmaceutical Journal and Pharmacist*, under the caption, "Customers I Have Met":

"Such funny talk on that there paper. I can't read it," complained an Insurance patient as she handed her prescription to me. This is the type of customer with whom my father (a Ph.C. in a large industrial city in the North of England) has to deal. A few weeks ago one of these asked very anxiously, "Do ye sell enigmas?" Talking of enemas reminds me that another customer told us that she must have one which would boil. Most chemists are, of course, familiar with the customer who asks the price of cotton-wool a pound, and on being told, immediately replies, "I'll have half an ounce." It was with such a one I had to deal a few weeks ago. Realising the futility of persuading her to buy any preparation to ease her aching feet, I advised her to bathe them, but she assured me it was impossible, as her "sister was bakin' in t' scullery, an' ther' weren't room." Another customer who wanted medicine for gastric trouble reiterated, "T'int wot I've eaten, for I've 'ad nowt but tripe an' bread an' butter for weeks." Some of these people are very droll. One in particular comes to my mind. He is an ex-miner, slow of speech and gloomy of aspect. He informed my father once that his wife had "got t'mule on," meaning, I suppose, that she was rather fractious and stubborn. The same man purchased a bedpan from me some time ago, but refused to allow me to wrap it up. Once we told our local wag he ought to have been on the stage; he agreed that he had "missed his vacation." Another customer complained that a rival chemist's cough mixture had failed to effect a cure, although he had swallowed the entire contents of the bottle at once. During a 'flu rush, my father, seeing a man well known to him enter with a prescription, said, "Hello, Mr. —, are you ill?" "Nay," was the airy reply, "nowt ails me, but I thowt I'd 'ave a bottle o' medicine,—chance." My father, having worked among these people for over thirty years, is naturally held in high esteem by many. One woman, after relating to him the death of a customer, wound up by saying loyally, "An' if 'e'd nobbut listened to you, 'e'd be livin' yet."

"I can't marry you," said the justice of the peace to the obviously nervous bridegroom. "If this girl is only seventeen, you will have to get her father's consent."

"Consent!" yelled the groom-to-be. "Say, who do you think this old guy with the rifle is, Daniel Boone?"

A girl is sweet,
But! how bitter
The same girl is
When her clothes don't fit her.

Two college boys were seated in a trolley car directly opposite a stout woman. At the Square she attempted to rise to leave the car but on account of her weight and the motion she experienced some difficulty.

"If she ate yeast maybe she'd rise better," said one youth to his companion in what was meant to be a whisper, but which was audible throughout the entire car.

As she finally arose, she turned to the youths and said: "Yes, and if you ate yeast maybe you would be better bred!"

—Selected.

Lecturer (in a small town): "Of course, you all know what the inside of a corpuscle is like."

Chairman of meeting (interrupting): "Most of us do, but ye better explain for the benefit of them as have never been inside one."

—Watchman-Examiner.

Extra! Extra!

There is a terrible war-feeling throughout the whole country! Even the new born infants are in arms!

"Boss, hab you got any ob dem cavortic pills?"

"Yes. Do you want them plain or coated?"

"Dunno. I want dem air ones what's white-washed."

"Hey, pal, hear of the latest invention?"

"What's 'at?"

"An organ without stops."

"Oh, yeah."

"Sure! Woman's organ of speech."

Psych. Prof: "If I say 'month' you think of thirty days, then, if I say 'thirty days,' what do you think of?"

"Jail."

—Carnegie Puppet.

If a body greet a body
With a knowing wink,
Should a body join a body
Going for a drink?

Cigarette Soliloquy

"I am not much of a mathematician," said the cigarette, "but I can add to a man's nervous troubles. I can subtract from his physical energy. I can multiply his aches and pains. I can divide his mental powers. I can take interest from his work and discount his chances for success."

Times Change

Year 1624: Indians sell Manhattan Island for a case of whiskey.

Year 1930: Citizens offer to swap back.
—*Amherst Lord Jeff.*

We deeply sympathize with the absent-minded professor who cleaned the cat's teeth one night, and then kicked himself out of the back door.
—*Carnegie Puppet.*

Short: "I say, old man, can you lend me a fiver?"

Long: "Impossible. I've tried to lend you money several times, but you always seem to look upon it as a gift."
—*Drexlerd.*

Al: "Where is the best place to hold the world's fair?"

Don: "'Round the waist."

Dean: "How many subjects are you carrying?"

Freshie: "One,—and dragging three."

Harry: "Waiter, what kind of meat is this?"

Waiter: "Spring lamb, sir."

Harry: "Thought so! I've been chewing on one of the springs for half-hour."
—*London.*

Our profs soon discover that the cliff dwellers weren't the only bluffers.

Joe Collitch: "Are you doing anything tonight?"

Sweet One (eagerly): "No, nothing at all."

Joe Collitch: "My! My! What a terrible waste of time!"

Paris?

"Pray, Jester, what is a Knight of the Garter?"

"A royal supporter, my lord."

Experience Counts

Win: "Say, Karl, can you tell me why it's always day-time to a hen?"

Karl: "I'll bite. Why?"

Win: "Because her son never sets. Tsh! Tsh!"

Tramp: "Lady, I haven't had a bite for two days."

Lady: "Is it possible! Here, Tige! Tige!"

The most absent-minded of men is the professor, who, when he hears himself knocking the ashes out of his pipe, will call out, "Come in."

Prescription Pete says, "A young mother should not be too ambitious to correct her children. She should begin at the bottom."

Lots of business men have involuntarily adapted themselves to the present weather. The days are short, and so are they.

"Were you guarded in your conduct while in New York?" said a father to his son who had just returned from a visit to that city.
"Yes, sir; part of the time by two policemen."

"We have struck a smoother road, haven't we?" asked a passenger of a conductor on an Arkansas railroad.

"No," replied the conductor, "we have only run off the track."

"What's yor chil's name, Aunt Liza?"

"Why dat's Prescription."

"How comes you call him dat?"

"Becuz he's hard ter get filled."

—says, "Crying widows marry first. There's nothing like wet weather for transplanting."

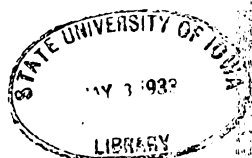


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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Hospital Internship for Pharmacy Students

By Robert M. Porter, B. S., Class of '29

Assistant Pharmacist in Lakeside Hospital, Cleveland

We are living today in a period of hospitalization. Every year sees thousands upon thousands of dollars spent in the building and equipping of new institutions wherein disease may be combated and studied. These institutions are in a great degree responsible for the rapid progress made in the field of medical science during the past few decades. The medical interne of today has many more opportunities to observe and study the ailments of the human body than did those of a generation ago. There are fully equipped laboratories, extensive x-ray equipment and most adequately outfitted operating rooms. All of these are at his disposal and for his observation. The doctor of the passing generation never had the advantages of fluoroscopic and cytosopic study during his earlier days.

The apothecary of the passing generation in turn never had even so much as an opportunity to observe the mechanics of hospital routine. Intravenous therapy was then in its infancy. The visualization of the gall bladder by means of dyes and x-rays was then unheard of. The dispensing of medicaments in ampoules was a project to be developed later.

Today many forms of minor surgery and x-ray diagnosis are carried out in the offices of the practicing physician. Many stains, solutions, minor equipment, etc., are required for this work. It is the duty of the pharmacist to keep up with the progress of medicine if he is to maintain a professional standing. These office supplies offer an excellent opportunity for contact between the physician and pharmacist.

The object of this article is not to attempt to point out that the pharmacist is losing a great source of income because he is not able to supply the diagnostician with an occasional sterile gall bladder dye for intravenous use. Rather, we would show that at least some first-hand knowledge of this and similar preparations has a bearing on the kinship between druggist and doctor.

Let us consider the question of the gall bladder dye. This you no doubt know is an aqueous solution of tetra iodo phenolphthalein (sodium). The dosage, 3.5 Gm, is obtainable in ampoules containing the above amount of the dry salt. The contents of one ampoule, directs the N.N.R., may be dissolved in 28 cc. of freshly distilled water, the solution filtered through fine filter paper and sterilized by boiling for twenty minutes. This, indeed, seems a simple procedure; however, we have been called upon in the hospital pharmacy to prepare this solution for an outside doctor, who states that the drug stores in his vicinity cannot supply him with this dye for use in his office. We believe that many people shudder at the phrase "for intravenous use." The hospital pharmacy offers a fine field for training one in the preparation of intravenous solutions. Do you not suppose that this doctor, also a well-known surgeon, would have held the pharmacist in his neighborhood in higher esteem had he been able, or made an effort, to fulfill his wants?

It is to be supposed that a substance such as the dye just mentioned would be discussed in the course of Organic Chemistry, and the question of sterilization considered in a course of Bacteriology, yet it is practice that gives one confidence. We feel that self-confidence may have been lacking on the part of the pharmacist.

Let us consider the day's work of the hospital pharmacist. We shall review our own duties in this case, for we know that the pharmacist's duties will vary with the institution wherein he is employed. In the University Hospitals of Cleveland it is the duty of the pharmacist to, first of all, supply the necessary medication for the patients in the various wards. Secondly, to compound and dispense the necessary medication prescribed in the part pay and free Out-Patient Department, numbering some four to five hundred cases a day. About fifty per cent of this number receive prescriptions. It is a further duty of the pharmacist to prepare all

medication for home-going patients, to prepare all solutions intended for intravenous use (except such as may be more economically purchased ready for use), such as glucose, gall bladder dyes, normal saline, gentian violet, mercurochrome, and such others as may be necessary from time to time. The preparation of Dakin solution is an uncommon procedure that is also carried out. The manufacture and supplying of all laboratory reagents still add to his duties. The supplying and keeping in repair all surgical instruments, the supplying of all catgut, horsehair, surgical silk, skin slips, silk-worm gut, bone wax, surgical needles, catheters, rubber tissue, adhesive tape, rubber gloves, syringes, ether and gases for anaesthesia, to the operating rooms are a few of the more important items supplied by the hospital pharmacy.

Many people will say that a study of all these various items and procedures involved are superfluous to the education of the pharmacist going into the retail store. In part, we shall concede this to be true, i. e., if by the retail store we conceive one of the patent medicine-hardware-restaurant variety. We do not agree if we are to consider the retail store as one wherein an ethical package goods—sundry prescription business is carried on. If the pharmacist of the coming period is to be employed in or own a store that fills as many as one dozen prescriptions a day, he has a sufficient need for the principles that may be learned in a period of internship in a hospital.

In the schools of pharmacy we have two groups of students, those who have never had any drug store experience and those who have had some experience in pharmaceutical manipulation. To the student who has never had any actual experience, the hospital pharmacy has a twofold advantage. Not only does he have an opportunity to obtain a first-hand knowledge of some of the less common procedures, but he also has a chance to view and carry out many of the more common practices. For instance, on our wards we have in the medicine cabinets a solution of mercury biniodide labelled—0.016 Gm. to 1.0 cc. The student has no doubt been taught in the classroom or laboratory the proper procedure for putting this chemical into solution. However, in one particular case during the past year, a student tried every available solvent from petroleum ether to almond oil. When questioned as to the properties of the salt, he at once recalled the use of potassium iodide. This particular bottle was

brought to the pharmacy by a nurse, apparently very much in a hurry for the medicament, and the student under pressure forgot to think. The embarrassment taught him a lesson which he will not soon forget. At this point, it might be well to state that a work sheet is kept of each student's work, a separate sheet being made out for each preparation, or each attempt at a preparation, as was the case with this student.

In the dispensary pharmacy, the student who has little or no chance to view doctors' prescriptions has another advantage in that he has an opportunity to decipher the hieroglyphics so common on many prescriptions. Many occasions arise in the dispensary pharmacy for the student to use his ingenuity. Whenever a prescription of this type is met with it is turned over to the student to figure out. Several examples are:

Rx.
Cal. Lot 90.0
Menthol9
Sig, External Use only.

Rx.
Liq. Carb. Deterg. 6.00
Ung. Aq. Rosae q.s. ad 60.00
Sig. To itching areas.

Rx.
Tr. Nux Vomica 180.00
Sig. 4 cc. t.i.d.

Rx.
Acid Acetylsalicylic 10.00
Elix. Luminal 90.00
Elix. Pepsin Comp. q.s. ad 180.00
Sig. 4 cc. t.i.d. et h.s.

These prescriptions represent a few cases wherein the student may again test and apply his knowledge of pharmacy before he gets out in the world for himself, and many lessons may be learned that will teach him to be cautious. We have also in the pharmacy many concentrated dispensing solutions so that the student has to figure concentrated amount for use in his certain prescription.

The student is allowed to fill certain prescriptions, the degree of trust put in him varying with the student's ability. The pharmacist in charge is responsible for all work turned out and must carefully check the prescription as it comes in and carefully observe the student as he fills it. The dispensary usually reveals just about what the student is capable of doing, for he always has a number of prescriptions ahead of him. If he has a tendency to be careless, it is easily detected and many times it is pos-

sible to produce an embarrassing situation that will do much in the way of correcting any slipshod tendencies.

No doubt many a good pharmacist just out of school has lost the confidence of his employer by mere carelessness or lack of self-confidence, or failure to use those principles he has been taught in school. In our course of hospital pharmacy special attention is directed to these three faults.

During the period that a student is in the hospital, he is taken through the institution, and among the things he sees are: the actual taking of an electrocardiogram, supplemented with an explanation of the electrocardiograph; the actual taking of a patient's basal metabolism, and the supplementary explanation; the taking of x-ray pictures and fluoroscopic examinations; the layout of the hospital in general and an explanation of what is known as hospital routine; and when possible the witnessing of a minor operation, or, if impossible, some dog surgery. In this way the student obtains some idea as to how sutures are employed, the full meaning of aseptic surgery and the precautions taken. Part of an afternoon is spent in the operating room and an explanation given of the various instruments and apparatus. We often hear people make complaints in regard to hospital discrepancies, and we believe that a knowledge of general hospital and operative procedure is an asset to the pharmacist if he is to protect the profession of medicine and its allied sciences.

We mentioned the supplying of catgut, catheters, instruments and other surgical supplies as the duty of the hospital pharmacy. The trend towards establishing prescription pharmacies is today very great. Many of these stores carry a line of sundry supplies for the use of the physician in his office practice. This situation, we believe, warrants a first-hand knowledge of these supplies and we know of no better place for a student to get it than in a hospital pharmacy. Who has more grief than the hospital pharmacist who has an inferior grade of goods passed into his hands? Who knows better than he that an inferior, old non-pliable ureter can cause much damage if it should break in the ureter? Well! All we can say is that if you would protect your sundry business, don't sell the genito urinary specialist in your building such a product if you would keep his good will.

Another quite common practice today is for

the eye specialist to do minor operative work in his own office. If the pharmacist were to offer him, even though no great profit were made, a sterile flush for the eye, when he sees fit to use one in minor surgery, might he not place more confidence in the pharmacist? Much more so, indeed, than in this case. A young doctor went out from a certain hospital where he had used certain solutions for diagnostic and therapeutic purposes, namely a one per cent solution of fluorescin and a one per cent solution of optochin. He went into a town as an eye specialist in connection with an established clinic. In the hospital he had learned to treat the pharmacist as a friend in need. In the town to which he went he sought out the corner druggist and told him his needs. The druggist graciously consented to supply all his wants. Two of the solutions stated above were among those mentioned to the druggist. One day the occasion arose to use the fluorescin solution. The doctor called the druggist and ordered an ounce of the solution to be delivered to his office. The solution came a very clear solution with a small deposit of insoluble powder in the bottom. You can imagine the doctor's embarrassment when he had to send his patient home and tell her to call again when he notified her.

In the meantime, the hospital pharmacist was in receipt of a letter from the doctor as well as from the druggist. We will not criticise, but we are sure that if that pharmacist had ever spent any time in a hospital pharmacy he would have questioned the doctor as to what he was going to use the solution for and would have been convinced that the sodium salt of the dye was what was required. We will go no further, but a similar occurrence happened with the optician. To say the least, the doctor could not have been inspired by the ability of the pharmacist.

Unfortunately, all schools of pharmacy are not so situated as to arrange a course in hospital pharmacy. It should be feasible wherever the school is part of a University wherein a school of medicine operates in conjunction with a university hospital. In the School of Pharmacy of Western Reserve University such a course has been in operation for a number of years. In February we move into a wonderful new hospital building adjacent to the campus of Western Reserve University where the work of hospital internship should have much more chance for development.

Pink Pills for Pale People

By Dr. Arthur J. Cramp, Director of the Bureau of Investigation, A. M. A. McBride
Lecture, Western Reserve University,
November 13, 1930

Credulity does not necessarily denote lack of brains. We are all credulous in those fields on which we have little knowledge. The lay public is credulous in the medical field; some medical men are credulous in other fields. Voltaire said: "The quack was born when the first knave met the first ignoramus."

For all practical purposes there are no such things as patent medicines. What we call patents are not patented. The Patent Office, before it issues a patent, has to be convinced that the product represents a new and useful invention. What we call patents, being neither new nor useful, could not be patented. It is a question whether they would be if they could. A patent is good for only seventeen years. After that it is public property, and any one can make it. The average patent medicine maker (I am using the term in its colloquial sense) is not satisfied with a monopoly of only seventeen years. He has a much simpler method of exploiting his product. He gives it a fancy name and gets a trademark good for twenty years. It can be renewed every twenty years, indefinitely. A trademark name, when built up, becomes a perpetual monopoly. The mere word "Bromo Seltzer" today is worth five million dollars. An enormous value has been built upon the name "Anti-kamnia."

When a person gets a trademark, the government is not interested in the product. The manufacturer could change the formula over night. Anti-kamnia has been changed three times. Many years ago Ayer's Cherry Pectoral appeared, containing morphine and alcohol. By and by the public woke up to the dangers of morphine, and the manufacturers substituted heroin (a much more dangerous drug); later they took out the alcohol; still later they put back the alcohol; but through all of these changes it remained Ayer's Cherry Pectoral. When you buy a patent medicine you buy a name, not a thing. The composition may be changed over night according to the commercial exigencies of the case. If a drug becomes too expensive, the manufacturers substitute another.

In 1907 the National Food and Drug Act, usually known as the Pure Food Law, went in-

to effect. This law made a great change in the patent medicine business. One of the requirements is that the manufacturer shall not lie on the label on the trade package. It does not say that he must tell the truth, but he must not lie. It made a great change in the wording of many labels. The whole trend has been to get away from saying anything on the label, but continuing to say as much as desired in the newspapers or on the billboards or other agencies that are not subject to this law. It is a sad fact that those avenues which bring in the greatest returns are not subject to the law. There are forty-eight laws against fraudulent advertising, but I know of only one case where this was ever evoked.

Another provision of the Food and Drug Act was that certain drugs must be declared on the label, both name and quantity. Only eleven out of hundreds, and some of the most dangerous are not included, for example: arsenic, strychnine, carbolic acid, corrosive sublimate.

At the present time we are having a renaissance of the testimonial industry. Thirty years ago it was part of the day's work for statesmen to give testimonials. The Peruna people published testimonials from about fifty members of Congress. That is not done today, but the Lucky Strike people do just as well in getting twenty thousand physicians to testify to something they know nothing about.

The average patent medicine testimonial is not made up out of whole cloth by the manufacturer. Most of them are documentarily genuine. They are easy to get, because we are so constituted that we are bound to give the credit to some artificial agency which belongs to nature. The tendency of nature is toward healing. This fact works just as well for the doctor as for the patent medicine manufacturer, but the doctor does not brag about it, while the patent medicine manufacturer does. Few of us can distinguish clearly between a sequence of events and cause and effect. Scientifically, then, testimonials are worthless, although documentarily genuine.

Medicaments are in a class by themselves. When you go into the open market to buy a radio, an automobile, or a suit of clothes, you know when you have been swindled. The product does not stand up, or wear, or give you service. You know you have been "gypped," and you will not go back to the man who sold it to you. But when you buy a patent medicine because you are feeling off color and in a few

days you are well, you are not in a position to say whether it was the medicine or not. Eighty-five per cent of cases of indisposition get well whether you do anything or not. The patent medicine manufacturer, then, has eight and a half chances out of ten. Medicaments should be advertised conservatively, but there is less frankness, honesty, and decency than in any other branch of advertising. When advertising people start to clean up, they always begin with patent medicines, because this type of advertising is the rottenest.

There are a few patented medicines. Castoria was patented. In seventeen years the patent expired, and anyone could make Castoria. Many did. Do not get the idea that a medicine that has been patented is better than one that is not patented. It should be better, but it is not. (The following part of the lecture was illustrated with slides showing labels, types of advertising, formulas, etc.) For example, there was a concern selling a cheap necklace as a cure for goitre, glass beads with disks of copper and zinc, which the patient wore after having rubbed a salve on the goitre. The Patent Office issued a patent on this as a new and useful invention in 1916. In 1930 another department of the government declared it a fraud and debarred it from the mails. Sanisal was patented, though not as a cure for obesity, but as a bath salt. It is 90% epsom salt, balance table salt, baking soda, and perfume.

The best example of a patent is the tape worm trap, which was in the form of a capsule to be made of gold or platinum, with a rectangular window and a spring, and baited with a piece of raw beef. The patient was to go without food for forty-eight hours, then swallow the trap with a string attached. The tape worm, being ravenous by this time, would grab the meat, release the spring and be caught! Then the patient could pull out the trap by means of the string. Rube Goldberg never conceived anything more fantastic. Yet this was patented in 1854.

Piso's cure for consumption changed to Piso's remedy and medicine for coughs and colds, a result of the Pure Food Laws, when lying became expensive instead of merely immoral. Another case was Mrs. Winslow's Soothing Syrup, which caused the death of many babies. It became necessary to show the ingredients on the label, so three lines of printing were added, with morphine sulphate buried in the middle. After a campaign by the magazines, they took out the morphine. Later they took out the alcohol, but it is still

Winslow's Syrup, today a more or less harmless mixture of carminatives and laxatives. Similarly, Dr. Town's Epilepsy Cure changed to Dr. Town's Epilepsy Treatment, and still later, to Town's Epilepsy Treatment, as he wasn't a doctor. It is still the same bromide mixture.

Here are four Lydia Pinkham labels. The first change came when they had to disclose the presence of 18% of alcohol, which really sold the medicine. The second change was omission of the statement "a sure cure for prolapsus uteri." On the 1930 label, it is "recommended as a vegetable tonic in conditions for which this preparation is adapted"! It is still Lydia Pinkham, although they have lowered the alcohol content to 15%—but in these days even 15% is nothing to sneeze at.

Some advertising men conceived the idea of putting pills on the market, capitalizing the well-known castor oil name, and called them "Castor Oil Pills, the effect without the taste." As a matter of fact, there was no castor oil in the pills, so, after the Pure Food Law, they had to change not only their claims, but the name of the product. They called it Casca Royal.

The label of Mayr's Wonderful Stomach Remedy stated that it not only cured gall stones, but showed them to you. The formula is olive oil, flavor, and Rochelle salts. A bland oil, followed by salts, sets up a miniature soap factory in the body, and, when the soap pellets were passed, the victim was told these were gall stones. The Mayr testimonials were fraudulent. Advertising copy was prepared in Chicago by Mayr, with such headings as "Old ——— resident cured of gall stones". The blank was to be filled in with the name of the town in which the advertisement appeared.

Nuxated Iron contains no nux and very little iron. It was advertised almost exclusively by the testimonial route, mostly from the sporting fraternity. There was a testimonial from Jess Willard, and then, when Dempsey beat Willard, a testimonial from Jack that "Nuxated Iron helped me to whip Jess Willard". When Jack got his, Gene Tunney was on hand with a testimonial for Nujol, although he did not say that it helped him to whip Dempsey.

There are some testimonials that are not difficult to prove worthless. Doans Kidney Pills have advertised by local testimonials. One man's testimonial for them appeared on one page of a newspaper, and on another page

appeared his death notice. When this was called to the attention of the manufacturers, they were much concerned and said the publishers had orders to check up on all such points before they ran the advertisement.

The "noble experiment" has made some difference in the patent medicine business, and, conversely, the patent medicine business has made some difference in the "noble experiment". S.S.S., advertised in the older days as a cure for syphilis, now as a cure for rheumatism, dropped its alcohol content from 15% to 12%. Peruna was originally 28% alcohol. It used to go into the dry southern states in carload lots. The government got after the Peruna people through the Internal Revenue Department and advised them to put some medicine in it, or it would be treated as a beverage. So they loaded it up with senna. I often speculate on what happened when the first shipment so treated reached the south. After the Pure Food Law, the alcoholic content of Peruna was cut to 20%. After the 18th Amendment, it was cut to 12% for domestic consumption, though for export it was still 20%, on the principle, I suppose, that "to him that hath shall be given". Then Peruna changed hands. The new owners must have more of a drag, because it is back to 18%.

Wine of Cardui was 20% alcohol. At the time the Wine of Cardui people sued the A. M. A., their lawyer insisted they could not lower the alcohol content, because it would not keep. After the 18th Amendment, they went to 10%, and put in some benzoate of soda.

The story of Vita-pep is that a reputable firm in the east had on hand, when the 18th Amendment went into effect, a large quantity of sherry wine. They did not want to bootleg it, but did want to get their money out of it. An advertising agency offered to take care of it. They obtained a chemist to mix it with rennin, pepsin, and vitamin B, three things which do not interfere with its use for beverage purposes. They asked a university laboratory to analyze it, took the analysis to Washington, and secured permission to put it out as a medicine. They sent out a circular to advertise it, really to call attention to the alcohol content which was printed in large type. On the label itself the type was smaller. After a time a letter was sent out, stating that there was an extremely limited quantity of Vita-pep on hand, and, after it was gone, no more would be manufactured. (They had evidently got rid of all the sherry wine.) Cus-

tomers were advised to order now, and prices on dozen lots were quoted.

To take up next obesity cures, Nikola Reducing Salts are just plain washing soda, perfumed, and sold for three dollars a package. Fayro promises to reduce two to four pounds in a night, and claims that an analysis was made of twenty-two hot springs and the ingredients incorporated in this preparation. It consists of epsom salts, table salt, and perfume. Obesity remedies advertise reduction without dieting and without exercise, because most of the people who are overweight are overweight because they eat too much and do not exercise. Marmola may reduce weight because it contains thyroid, and, for this reason, it is extremely dangerous. Most of the obesity remedies are harmless, but Marmola contains a half grain of thyroid in every tablet, and it is suggested that four tablets be taken per day. The taking of thyroid should be under the direct control of physicians.

In the cosmetic field there are certain classes of products that are more or less dangerous. One of these is depilatories. De Miracle contains sulphites. They will eat off hair, but, as hair and skin are of the same structure, they will also dissolve skin if left on long enough. The sealing wax type of depilatory is not dangerous. The Tricho System uses X-ray to destroy hair. We strongly advise against this. It does harm, and usually the results do not appear for months or even years after exposure. Some months later, warty protuberances appear that may develop into cancer. There is also atrophy of the skin. The X-ray does destroy hair papillae, but must, in the very nature of the case, act to destroy the tissue. The Dermic Institute also is of this type. Let me congratulate Cleveland on having a wide-awake medical group and a Better Business Bureau which combined to investigate and warn the public against this thing. The man behind this Institute stays in one town until damage suits begin to come in, and then skips out to some other city.

Next to the obese woman, no one is so optimistic as the bald-headed man. Van Ess has had a large sale mostly on account of the unusual container. Vreeland is now debarred from the U. S. mail as a fraud. It is half and half, water and glycerine, with a trace of sage oil. Ten cents worth of ingredients sold for \$2.75!

I quote from the trade journal of the proprietary medicines. "Keeping people pulling corks is the key to success of the proprietary

business." That is the indictment against the patent medicine business, not that they may contain harmful drugs—although it may be—but that it is a business with millions of dollars behind it, based entirely on making well people think they are sick and getting them to buy these nostrums. The older advertiser merely stated that he had something to sell. The twentieth century advertiser creates a demand. This may be justifiable for radios, automobiles, and so forth, but there is no excuse to so advertise drugs as to make well people think they are sick for the sole purpose of getting people to buy these drugs.

What is the remedy? Is there no place for home remedies? Yes. The A. M. A. has gone on record to that effect. We are facing a condition. Self-medication is here to stay. What should be done? Get the people, if we can, instead of buying these secret remedies about which they can know nothing but what the manufacturer tells them, to buy official remedies, those in the Pharmacopoeia and N. F. These medicines are open to all manufacturers to make, but the competition keeps the prices low, so that it does not pay them to spend millions of dollars in advertising.

Rational Vegetable Drug Therapy

By Geo. Gerlach, '32

Of the three kingdoms, vegetable, animal, and mineral, which supply man his drugs, the vegetable kingdom occupies the most important position from an historical standpoint. As far back as the records of history are available, man has employed, more or less extensively, plants and the products of plant life as drugs. Biblical records tell us of the use of such drugs of vegetable origin as myrrh, olive oil, and cinnamon. The Papyrus Ebers records the use of many other vegetable drugs, centuries before the Christian Era. The ancient priests and doctors who prescribed and employed these drugs knew nothing about their active constituents, and they had little more than a very vague idea of their uses in the treatment of certain ailments. All through the Dark Ages in Europe, the Renaissance, and up to the beginning of the 19th Century, the use of vegetable drugs was purely an empirical form of medication.

Digitalis, one of our most important vegetable drugs today, was known to Welsh physicians as early as 1250 A. D. The drug was used internally in the treatment of various diseases, and externally was applied to wounds and ulcers. It remained, however, an unimportant drug up to the decade 1775-1785, when it was investigated by an English physician, William Withering. He had heard of an old woman of Shropshire, England, who was using an herb concoction of her own to successfully treat dropsy. Withering, who was of an experimental mind, sought out the old woman and obtained her formula. To the medical profession of that period, the unusual drug employed was known as Foxglove, and Withering showed that it was this ingredient alone which was responsible for the effectiveness of the mixture. He then carried on an extensive study of digitalis, and in the year 1785 published his famous paper entitled "An account of the Foxglove and some of its Medicinal Uses." The work of Withering on digitalis represents the beginning of the scientific study of useful drugs.

The alkaloids were the first great pharmaceutical discovery of the 19th Century. The chemistry of alkaloids dates from 1817, when Sertürner, the apothecary of Einbeck, isolated morphine in a crystallizable form from opium. He showed that the activity of this long-known drug was not due to a resin present in it, as was formerly supposed, but that its action was dependent upon the morphine present. We may well be proud of the fact that a pharmacist isolated the first alkaloid known and used in medicine.

This discovery stimulated research upon many vegetable drugs by a number of investigators, and in rapid succession came the announcements of the discoveries of quinine, strychnine, bruceine, narceine, and veratrine by Pelletier and Caventou, of emetine by Pelletier and Majendie, of solamine by Desfosses, of nicotine by Vanquelin, of atropine by Brandes, of delphinine by Feneulle and Lassaigue, of codeine by Robiquet, and of picrotoxin by Boullay. Every one of these discoveries was made by a pharmacist. Since then, the number of alkaloids and glucosides which were isolated from useful drugs has rapidly increased. Much is now known regarding the structure of most of the important alkaloids, some syntheses have been effected, and there is no longer any doubt that many of these alkaloids are closely related and have a common nucleus.

The discovery and isolation of active principles which were crystallizable from appropriate solvents gave the pharmacist an opportunity to purify his medicines and to determine which of the constituents of a drug produced the characteristic effect. Furthermore, upon this scientific basis, the detection of antagonism between the principles of the same drug (such as exists in opium) can be established, and, by the separation of these principles, the undesirable action can be eliminated if so desired. Active constituent isolation often makes it possible also to test the alkaloid or glucoside from the drug upon the specific organ (atropine in eye) of some experimental animal upon which corresponding organ it is intended to act in man, without interference from the vast amount of inert extractive or resinous matter which is always present in the galenical preparations of the drug itself. Another feature of active principle isolation which is of greatest importance is the fact that it enables us to make a chemical assay of a drug. Such an assay of an alkaloid-bearing drug is generally a measure of its therapeutic usefulness. Thus a chemical determination of the mydriatic alkaloids of belladonna is an accurate index of the potency of either the leaves or root of atropa belladonna. Our Pharmacopoeia has established quite a number of such chemical assays for official drugs.

In glucoside-containing drugs, however, this process of active constituent isolation is not always an accurate or reliable measure of the therapeutic usefulness of the drug. It was almost a century after Withering's splendid work upon digitalis before Nativelle in 1871 isolated digitoxin, one of its most important principles. In the case of digitalis, a chemical assay of the active glucosides is not an accurate measure of its heart tonic value. Possibly there is some enzyme present which activates the glucosides in the body. With such a drug, a biological assay is usually resorted to. It is, therefore, carefully tested upon the exact tissue (animal) upon which it is expected to exert its action in the human body. Another very important therapeutic measure that the isolation of pure active principles has made possible is that of medication by injection. In this way it is possible to obtain a sure and prompt action with many drugs.

At present we have about 200 drugs from which alkaloids have been isolated. The continuance of research in this line of work represents one of the modern trends in pharmacology and therapeutics. Not only is it neces-

sary to separate the active constituents from new vegetable drugs, but old ones must be re-examined in the light of modern pharmacology and chemistry. A recent example of the opportunities in research upon old drugs justifies its necessity and possibility. For centuries the Chinese have known and used the drug Ma Huang. About 1887 Naggai isolated the active constituent, and called the alkaloid ephedrine. However, neither the crude drug nor the alkaloid were used to any appreciable extent in Europe or America until 1925-1926, when K. K. Chen and his associates discovered its epinephrine-like pharmacological action. Additional research upon the drug proved its real value, and ephedrine is now very widely used. The investigation of Ma Huang not only added an important drug to our materia medica and aided in our knowledge of alkaloidal synthesis, but, since then, many other compounds chemically related to ephedrine have been synthesized and found to possess valuable therapeutic properties.

The trend of modern therapeutics is to identify the disease and find a scientific basis for it, then to treat it with a drug to either combat the infection, supply the deficiency, or modify the pathological process. The vegetable kingdom is still the source of most of our important drugs. In modern materia medica, if our treatment is to be rational, we must employ remedies which will specifically influence the altered tissue. We already have a number of such specifics, but, in the treatment of degenerative disease, we have little to offer in the way of drug therapy. Our hope for the future in the conquest of disease lies in systematic pharmacological research, and the vegetable kingdom still gives fair promise of remaining the principal source of new rational drugs.

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AVERTIN

A New General Anaesthetic

By Willis H. Clinton, '31

Any new advances which have been made in anaesthesia have been those of improved methods of administration and technique rather than the introduction of new anaesthetics. This is due partly to the fact that anaesthetics have come to be regarded as substances to be administered by inhalation, a method which has

attained popularity because it permits accurate control and regulation of the duration and depth of the anaesthesia; and partly to the reliability of the three volatile drugs—ether, chloroform and nitrous oxide—introduced in the very earliest times.

Rectal anaesthesia has certain advantages over the inhalation method: it is more comfortable to the patient, it does not necessarily require the presence of an anaesthetist, for the surgeon himself can administer the anaesthetic, and it is more convenient for operations about the head and neck. The main disadvantages are the risk of irritation to the intestinal mucosa, and the difficulty of maintaining a constant concentration of the anaesthetic in the tissues. This second problem is intimately connected with the absorption and excretion of the drug in question, as the administration of a rectal drug is not continuous, and, once given, it is impossible to control its action further.

About three years ago it was discovered that tribromethyl alcohol induced general anaesthesia, and that it was best administered per the rectum. This compound was placed on the market in the form of a concentrated solution, and given the trade name, Avertin Fluid. This solution contains 1 Gm. of the drug in 1 cc. of solution. The solvent used is amylene hydrate, and because of its volatile nature, but not explosive, the containers should be kept tightly stoppered, and away from an open flame. Avertin Fluid is supplied only in 100 cc. black bottles.

For basal anaesthesia, the average dose of Avertin Fluid is 0.1 cc. (100 mg.) for every kilogram of body weight. In about 30 per cent of adults, this dosage is sufficient to produce complete surgical anaesthesia, but in the remainder it is necessary to supplement its use with a small amount of ether, ethylene, nitrous oxide, or some other inhalant anaesthesia. The total amount of Avertin Fluid should rarely exceed 6 to 8 cc. for women and 10 cc. for men. For debilitated, cachetic, or dehydrated patients, or for obese patients, it is recommended that the dosage should not exceed 0.08 cc. (80 mg.) of Avertin Fluid per kilogram of body weight. In obstetrics, where deep anaesthesia is not usually necessary, an average dose of 0.06 cc. (60 mg.) is suggested, to be given when the child's head is below the pelvic brim. If necessary, the dose may be repeated in three or four hours.

Although calculation of the dose according to the body weight is only an approximate guide, it is advisable to adhere to this scheme

until the individual surgeon or anaesthetist has determined by experience the type of patients who require a larger or smaller dosage. As children are more tolerant to Avertin than adults, no allowance need be made for youth in calculating the dosage. On the other hand, the anaesthesia is not usually so deep in a child, and relatively more of the inhalation anaesthetic will be required.

Preparation of Solution

1. Consult the dosage table to determine the amount of Avertin Fluid and distilled water required to make a 2.5 per cent solution.

2. Heat the measured amount of distilled water to 40°C. (104°F.), using a glass receptacle that can be tightly closed, a Florence or Erlenmeyer flask is suitable, with a capacity of 500 or 1000 cc.

3. Measure the referred amount of Avertin Fluid with a graduated cylinder or pipette.

4. Add the Avertin Fluid to the distilled water. Stopper the flask, invert and shake vigorously until all the globules of Avertin Fluid have disappeared.

5. Avoid the precipitation of Avertin in crystalline form by not allowing the solution to cool before use. If precipitation occurs, discard the solution.

6. Test the solution immediately before use with Congo Red as follows:

Place 2 to 5 cc. of the prepared 2.5 per cent solution of Avertin in a test tube and add one drop or two of a 1:1000 aqueous solution of Congo Red. A pure orange-red color should develop. If the color is or becomes blue or violet, the Avertin solution should be rejected as it has become decomposed and is hence dangerous. This test is a reliable safeguard only if the solution has been prepared with pure distilled water. Therefore, ordinary tap-water should never be employed in making the solution.

Manner of Use

The rectal injection of the 2.5 per cent solution of Avertin at body temperature is given 20 to 30 minutes before the operation, in a quiet, darkened room, preferably the patient's room. The administration is usually effected by gravity, using a glass funnel with a rectal tube or a male catheter. No test for depth of anaesthesia should be made for at least 15 minutes. Then, if the application of Tr. of Iodine, towel clips, or such, elicits reflex movements, a little ether, or other inhalation anaesthetic, may be required, and should be given before making the incision.

Pharmacopoeias

(A Brief History)

By Russell McArtor, '32

One who reads the current pharmaceutical journals cannot escape knowing that the United States Pharmacopœia is at present undergoing the process of the eleventh decennial revision. Some have probably learned also that the British Pharmacopœia is also being revised. In view of this, we students have been asked to study, for our own information, the methods of revising the U. S. P., how the work is carried on, by whom, through what authority, etc. While this is all very interesting and desirable knowledge, most of us in our excited interest in the present revision have missed another slant at pharmacopœias which is also very interesting, that is, their history. The writer believes that it will be of interest at this time to briefly discuss a history of the origin of pharmacopœias and their development through years.

The art of Pharmacy is about four to five thousand years old, but true pharmacopœias have been in existence for only about four centuries. By a pharmacopœia we mean a book used as a standard, containing directions for the identification of simples, and the preparation of compound medicines, being published or authorized by a government or by a pharmaceutical or medical society. Until the sixteenth century there were no authoritative pharmacopœias. Preceding the appearance of pharmacopœias, the apothecaries used as standards the treatises of Dioscorides (50 A. D.), Andromachus (75 A. D.), the Antidotarium (called magnum) of Nicholaus Alexandrius, De Medicinis Laxativis and the Antidotarium of Mezue, and, most important, the Antidotarium (called parvum) by Nicholaus Præpositus of Salerno. These volumes had been widely used for many years and were really the only texts upon which the apothecary could rely. There were also formularies which were comprised of privately collected groups of formulæ published in pamphlet or book form, some of the earlier ones being in manuscript.

During the second quarter of the sixteenth century, a young German, Valerius Cordus by name and famed for his interest and work on pharmaceutical formulæ, was stopping for a visit in Nuremberg on his way to Italy. Some of the apothecaries there, knowing of his fame, asked him for a copy of his collection of formulæ. Valerius Cordus wished to obtain offi-

cial sanction, so he submitted a copy to the senate which immediately turned it over to a committee of physicians for approval. This body praised the work very highly and recommended its use without alteration. The senate then ordered copies to be printed, and issued an order requiring that all medicines be made according to these formulæ. In this manner the first authorized pharmacopœia was compiled and published in the year 1546 A. D.

The formulæ contained in this book were chiefly of Arabian, Greek, and Roman origin. They were selected from such authors as Dioscorides, Galen, Rhazes, Andromachus, and Mezue. Comparatively few types of preparations were included, the most important ones being Aromatics, Opiates, Confections, Conserves, Purges, Pills, Syrups, Salves, and Oils. An interesting characteristic of these formulæ is the multiplicity of ingredients, some being of no value whatsoever.

The necessity for a definite and authoritative standard for the selection and preparation of medicines had long since been realized, but it seemed that a spur was needed to start any development of the idea. The publication of the Pharmacopœia of Nuremberg led to the publication of local pharmacopœias in other cities. The first to follow was the Pharmacopœia of Augsburg, which was published in 1564. One was published at Cologne in 1565, and one in Lyons in 1576. A great deal of interest arose in this work, and many other cities prepared pharmacopœias to meet their needs for local use. Some of the universities and hospitals also had their own private standards. It is well to note that all those issued during that period were purely local standards.

At the beginning of the seventeenth century, we notice a great deal of advancement in the nature of the publications and also find them becoming standards over wider areas. In 1618, the Pharmacopœia of the London College of Physicians appeared, which was accepted as the standard for England proper. The Edinburgh Pharmacopœia (1699-1841) became the standard for Scotland, and the Dublin Pharmacopœia (1807-1850) the standard for Ireland.

The history of the London Pharmacopœia shows best the development of types and uses of drugs. The first volume, written in Latin, was founded chiefly on the works of Mezue and Nicholaus of Salerno. An English version appeared in 1649. The compounds entered were for the most part heterogeneous mixtures, some of which contained an enormous number of ingredients. One formula is

known to have contained 130 ingredients which were not all of the simplest form. A great number of identical simples were included, being supposed to have different properties according to the source. For example, pearls, oyster shells, and coral were supposed to be of different composition. The "moss from dead men's skulls", excrements, and many other such ridiculous remedies were employed. It was not until the edition of 1721 that any important alterations were made. In this revision many of those ridiculous drugs previously used were omitted; the botanical names of herbs were for the first time added; the simple distilled waters were made of uniform strength; and the cordials and sweetened spirits were omitted, as well as other compounds which were no longer in use. Another great improvement was made in 1746, when only those medicines which were accepted by a majority of the pharmacopœial committee were admitted. An attempt was also made to simplify the older formulæ by rejecting the superfluous ingredients. Successive revisions were made approximately every twenty years until 1851.

At the beginning of the nineteenth century difficulty arose due to the differences in the strength of parallel preparations included in the London, Edinburgh, and Dublin Pharmacopœias. When an English prescription was filled in Scotland or Ireland, or *vice versa*, dangerous complications arose. As a result of this, the Medical Act of 1858 was passed in England which ordered that the general medical council should cause to be edited a British Pharmacopœia. The first copy appeared in 1864. Thus we notice that the three local pharmacopœias mentioned above were replaced by one, national in scope, which brought uniformity in strength and constituents of preparations with safety to the public. Revisions have been made periodically, being compiled by committees of pharmacists and physicians.

The first national pharmacopœia, however, was the French Codex, published in 1818. This standard has grown to such an extent that it is perhaps the most widely used of all pharmacopœias. Used in connection with Dorvault's L'Officine, it is the standard for druggists in a large portion of Central and South America; it is also official in Turkey. The latest edition contains about 1250 drugs and preparations, or double the average of other modern pharmacopœias.

The United States, though yet a young nation, brought forth the second pharmacopœia, national in scope, in the Pharmacopœia of the

United States of America, 1820. The first volume was printed in both English and Latin, but subsequent revisions contained only the English. There had been three pharmacopœias in the United States previous to this one. The Military Hospital at Lititz, Pa., had published one in 1778 for its own use; the Massachusetts Medical Society published one in 1805 for local use; and in 1815 a private standard appeared at the New York Hospital. However, these were discontinued upon the appearance of the national pharmacopœia. It is taken for granted that we all know the history of our own pharmacopœia, so that will not be discussed.

We see then how a few collections of formulæ developed into pharmacopœias, first as local standards, and then gradually grew in area covered until they became national in scope. At the present time twenty-six nations have their own pharmacopœias as national standards, some being used in other countries as well. National pharmacopœias are found in Austria, Belgium, Chile, Denmark, France, Germany, Great Britain, Greece, Holland, Hungary, India, Japan, Mexico, Norway, Portugal, Russia, Spain, Sweden, Italy, Switzerland, the United States, Venezuela, Roumania, Finland, Argentina, and Servia.

Pharmacopœias are usually revised every ten to fifteen years, and their revision requires several years to carry out numerous experiments for devising suitable tests and formulæ. This makes it impossible for any one edition to be up to date. This difficulty has been met in England by the issue of such non-official formularies as Squire's Companion to the Pharmacopœia, and Martindale's Extra Pharmacopœia, recording all new remedies, their uses, doses, and preparations. These are revised as often as a new edition of the British Pharmacopœia appears. In the United States we have a book of similar purpose in the New and Non-Official Remedies, published by the American Medical Association. This publication is revised every year.

Still another difficulty arose in establishing standards for chemicals and drugs which were not official in the pharmacopœias. This has been remedied in England by the publication, under the authority of the Council of the Pharmaceutical Society of Great Britain, of the British Pharmaceutical Codex, which gives the character of, and tests for purity of many non-official drugs and preparations. As well, there are given standards for many glandular preparations and antitoxins that have come into use

in medicine, but have not yet been introduced into the British Pharmacopœia. In the United States, the National Formulary, published by the American Pharmaceutical Association, serves to establish standards for drugs and chemicals which are commonly used, but not official in the U. S. P.

Attempts have been made by international pharmaceutical and medical conferences to settle a basis on which an international pharmacopœia might be prepared, but so far without result. An imperial standard, adapted to the general and local requirements of all parts of the British Empire, has met with fair success. With the aid of medical and pharmaceutical authorities from each division of the Empire, an Indian and Colonial addendum to the British Pharmacopœia was compiled and published in 1900. In this volume, each item received the official sanction of the countries indicated in the monograph. Several unofficial, universal pharmacopœias have been published in France and England. They compare the strength of similar preparations of the different countries.

It does appear probable, as Pharmacy grows as a science, that it will be indicated which of these various parallel preparations are the safest and most active. Too, the general adoption of the metric system of weights and measures will lead to a clearer approximation of strength than heretofore. In a recent address given to the Northern Ohio Branch of the American Pharmaceutical Association, Dr. E. Fullerton Cook stated that the interest of the revision committee of the British Pharmacopœia in the U. S. P. presages a future full of coöperation between all English-speaking countries as regards pharmacopœial matters. Furthermore, because of the already widespread use of the British Pharmacopœia and the growing use of our own in the Spanish-speaking of the Pan-American countries, one can ably vision a well-nigh universal adoption of common drug standards before the close of the present century.

From this brief discussion, it is hoped that the reader will be able to realize the vast importance of a national pharmacopœia, and too, why so much care must be taken in the revision of a pharmacopœia to make every particular as accurate as possible. In the light of this, we can regard the progressing revision of our own pharmacopœia with more sincere interest.

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE MEETS IN CLEVELAND

The American Association for the Advancement of Science held its 87th annual convention, and its 4th Cleveland meeting, beginning the week of December 29th, 1930. This association is made up of fifteen sections and about forty affiliated and associated societies.

Many of the divisions reported notable advances and discoveries in the various branches of science. One of the outstanding announcements of this kind was read in the physics section, before the American Physical Society. This announcement won a prize of one thousand dollars, known as the Cleveland award. Chief credit for the discovery is given to M. A. Tuve, head of the terrestrial magnetism department of the Carnegie institution of Washington, although he shares the award with two of his assistants, L. R. Hafstad and O. Dahl. The paper as read described the artificial creation and measurement of radium rays in a two million volt X-ray tube, which are equivalent to the rays given off by 182 million dollars worth of radium. This is a quantity greater than all the known radium in the world.

The ray created, technically known as the gamma ray, had sufficient strength to penetrate three inches of lead and was said to correspond with the radium ray in wave length. It is said to be of far greater strength than the X-ray. Creation of this ray, say scientists, leads to the belief that the eventual development of an artificial cosmic ray cannot be considered as an impossibility. The cosmic ray penetrates to from six to 10 feet of lead.

The new rays measured by the scientists correspond to radium radiation having a short wave length. The radium, or gamma rays, are not confined to a single wave length but cover a wide band of differing lengths. The gamma

rays are used by doctors in the treatment of cancer. Radium also produces two other types of rays. One of these, beta rays, travel at almost the speed of light, 186,000 miles a second. Beta rays are produced by the three scientists at a power nearer that of the real radium emanation than heretofore obtained. Alpha rays, the other radium emanation, have not been obtained, but they are the chief objective of the scientists now. They shoot out into space at a speed of 12,000 miles a second. When they finally are obtained, the scientists intend to smash atoms with them in the hope they may fulfill the age-old prediction of the transmutation of elements.

Metric Association Meeting

The Metric Association, an associated society, held its three meetings on December 29th. This society is organized for the purpose of furthering the universal adoption of the metric system in this country. The system has been adopted for all purposes by the principal countries of the world, with the exception of the English-speaking ones. In the English-speaking nations the system is used, of course, in all the fields of pure science and to a large extent in the technical fields.

It is generally recognized by everyone who is entirely familiar with both the English and metric systems of weights and measures that the former is archaic and leads to chaos in modern commercial interchange of commodities. The metric system is direct, simple, and a great time-saver. Because the English system is bunglesome accounts for its being thrown aside in the sciences.

The Metric Association is officered by such men as Dr. George F. Kunz, gem expert for Tiffany & Co., New York, and Dr. A. E. Kennelly, Professor of Electrical Engineering in Harvard University, both of whom delivered addresses at the meeting. It is interesting to note that the mineral, "Kunzite", is named in honor of Dr. Kunz. The secretary of the Association, Mr. Howard Richards, and the treasurer, Mr. Frederic L. Roberts, may be addressed at 156 Fifth Ave., N. Y., where the central office is located. Those interested in the advancement of the Metric System should address communications to this office.

Progress was reported by the officers in their annual reports. It is their opinion that the inertia, so prevalent in all matters of this kind, is being slowly but surely overcome, and that by the middle of the present century the metric system will be in common every-day use.

GROWING USE OF THE METRIC SYSTEM

In the distant past we have read much about the metric system of weights and measures, and its advantages over the other systems in use. Druggists in the past have been opposed to the use of the metric system because they were in the habit of converting all prescriptions written in this system into the apothecaries system rather than taking the slight bother to buy metric weights and measuring glasses. While they believed in conversion, they were never converted to the use of these weights.

Time has made a change in this attitude. Pharmacopoeial formulas have been expressed in this system for four decades. The colleges of pharmacy and medicine have been teaching it for at least that long, and most of the newer text books advocate and use the metric system entirely. So, with most of the anti-metrics gone from the picture, we are gradually getting into a position to put the metric system into full swing. The greatest drawback at the present time is the fact that druggists have to buy supplies and merchandise on the scale of the old style weights and measures. The next step then seems to be for the wholesalers to package and price their goods by the metric system. When this has been done, it will be easy for the druggist to say that if one kilogram of potassium iodide costs \$8.25, then 10 grams cost \$0.0825. At a glance, one can see the advantage of this system in mental calculation over the old system.

The United States and Great Britain are the only places of international importance not using the metric system commercially. The International Chamber of Commerce, which is to hold its first meeting in America at Washington next May, is being urged to make the issue of world metric standardization a prominent part of its program. Advocates of the metric system in the United States say that the adoption of world commercial standards by this country would be of vast benefit to its foreign trade.

When in this country the metric system is in as general use in trade as in professional circles, the druggist can buy, sell, manufacture and dispense all in the same kind of weights and measures. That is something to which pharmacy may look forward with more than passing interest.

—*The Druggist's Circular.*

The Reserve Pharmacon

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EDITORIALS

Suits for civil damages are, at all times, a veritable Damocles' sword over the head of pharmacy proprietors.

PHARMACY AND ETERNAL VIGILANCE

In case of criminal negligence, of course, any clerk or agent of the proprietor, registered or unregistered, must stand upon his own feet and take the consequence of his own unlawful act. He can not shift the burden over onto the shoulders of the "boss". However, whether a criminal act or negligence is proved or not, the way to civil damages is frequently wide open and this phase of possible eventualities should always be kept in mind when the drug store owner employs an operating personnel.

As an opportune example of the above situation, the news columns recently reported a case from the State of Washington where a purchaser ordered one hundred tetrachlorethylene pills for the treatment of his foxes. Carbontetrachloride pills were delivered instead. As a result, the purchaser's fox farm was sadly decimated and a suit started for damages was successful. The Supreme Court of Washington found no error in the appeal and quoted the following language in support of its confirmatory decree:—

"The negligence which must be established to render a druggist liable in such a case as

this is measured by his duty; and, while this is only to exercise ordinary care, the phrase 'ordinary care' in reference to the business of a druggist must be held to signify the highest practicable degree of prudence, thoughtfulness, and vigilance and the most exact and reliable safeguards consistent with the reasonable conduct of the business in order that human or animal life may not constantly be exposed to the danger flowing from the substitution of deadly poisons for harmless medicines."

Of course, it is true that modern business and professional practices have developed a practicable method of defense, by way of insurance, in order to protect themselves from unscrupulous attempts to collect damages for alleged mistakes or wrongful acts. But the crux of the matter can not be considered entirely from the commercial viewpoint. In professional practice, or, for that matter, in any ethical business, one must consider the moral side as well, if he is to rear himself above the common level of the racketeering businesses now so prevalent in this country. Certainly, if pharmacy is to lay claim to professional privileges and prerogatives, it can not assume a smug indifference to its professed ideals; it must, at all times, aim to avoid mistakes, thereby giving assurance to the public that, in Pharmacy, eternal vigilance is the price of safety.

Cases of accidental strychnine poisoning with fatal results among young children have come

A DANGEROUS PRACTICE

to be frequently reported throughout the United States. A medical authority recently stated that many fatal convulsions in children under five years of age, reported with cause unknown, are unquestionably cases of strychnine poisoning.

Dr. John Aikman, of the Rochester Pediatric Society, claims that a large proportion of these poisoning cases is due to the indiscriminate use of tonic tablets and other medicines containing dangerous amounts of strychnine. Many of these, such as A. B. & S., A. B. S. & C., Hinckles, and others, have become general household remedies for constipation. In connection with this statement it is interesting to note that Fantus and other authorities have pointed out the fact that strychnine never acts for more than four hours; it is rapidly absorbed and rapidly excreted. On the other hand, aloin is slow, requiring more than double the length of time for strychnine, so that when it gets into action the strychnine has, for hours, left the system by excretion into the urine and can no longer serve as an adjuvant to the aloin, which is obviously its function in such combinations as those mentioned.

Regardless of whether strychnine is useful or not in cathartic tablets, it is generally recognized as one of the most deadly of all the drugs in our materia medica. Its indiscriminate distribution and use by the general public for the purpose of self medication cannot be condoned. It appears that most poisoning cases arise through the tendency, on the part of adults, to leave the tablets within the reach of children. The tablets or pills are usually sugar coated and vividly colored. This makes them attractive to the child, for in appearance they much resemble the popular little candies which children are fond of tasting momentarily and then swallowing whole. If the tablets were left uncoated, the bitter taste would probably make them safe; children, like rodents, usually taste before they swallow.

In view of all this it is most important that the state drug laws of the nation take cognizance of the situation. In many states poison

labels are not required on preparations already mentioned, Bland Compound and the like, because they come under the head of "home remedies". In some states dealers other than pharmacists may sell tablets containing strychnine, the nature of which may or may not be indicated in small, inconspicuous type. The danger arising from the taking of a considerable number of the tablets is in no way indicated.

Under the Ohio law it appears that strychnine and other virulent poisons can be sold from drug stores only. The *amount* is limited for certain poisonous preparations, including strychnine preparations, to packages of one-half ounce, if the package does not contain more than one adult dose of the poison. But a succeeding section of the law ingeniously takes the teeth out of it when it provides for the sale of pills, tablets, and lozenges in any amount, when the dose recommended does not exceed one-fourth of an adult dose. These pills, tablets, or lozenges need not bear a poison label and their sales need not be recorded in the store's poison sales record. Obviously, this allows the uncurbed distribution of the aforementioned strychnine preparation in any amount, so far as the state of Ohio is concerned.

Granting that the slipshod method of strychnine control is relatively harmless, so far as adults are concerned, the dangerous nature of all strychnine preparations in the hands of children seems to call for some restraint in the present dangerous distribution as now practiced.

It appears that some of the readers of these columns, in our last previous issue, were not

PERCENTAGE SOLUTIONS AND THE METRIC SYSTEM

thoroughly convinced of the simple availability of the metric system for the purpose of making extemporaneous solutions on a percentage basis. One of our interested contemporaries asks if the tenets of pharmaceutical technique allow one to metricise a prescription that is written in the apothecaries' system, in other words, fill it by using metric weights and measures. And, furthermore, whether we are just

tified in assuming that any considerable number of practicing physicians sanction the making of percentage solutions on the metric weight-volume basis, especially when prescriptions are written in the apothecaries' system.

We believe it is entirely a matter of expediency whether a prescription is to be metricised or not. It is certainly true that the pharmacist who has not become expert in the matter of transposing equivalents should stick to whatever form in which the prescription is written. When one tries to work with unfamiliar tools, progress becomes harder and mistakes easier. Since the metric system has come into use for scientific purposes the world over, and for general purposes in practically all but English speaking countries, it seems entirely logical that the pharmacist should follow the example set for him in many of the scientific arts and technical industries of the nation, such as optical work, radio industry, jewelry manufacture, Army and Navy ordnance, coast and geodetic survey, air service, hospital service, etc. In these fields of endeavor we find that designs and specifications coming from outside sources are transposed to the metric system. Simply because some medical practitioners insist on writing archaic specifications, one is not justified in limiting pharmacists to antique methods.

Now in respect to the acceptability of percentage solutions made on the weight-volume basis. It is granted that in pure science, percentage composition tables are expressed in terms of per cent by weight. However, since it is not common practice in the U. S. A. to weigh liquids, but to measure them, it is only in analytical laboratories, as a rule, that this procedure is carried out. Some physicians and pharmacists, in their attempts to be scientific, have straddled the situation—keeping one foot on scientific ground and the other on common practice ground—by weighing the solute and *computing* the volume of solvent to be added. With most pharmacists this method resolves itself into the weight-volume method by the apothecaries' system. That is, they take a certain number of grains of solute and bring it up to a certain number of fluid ounces.

As stated in our previous editorial, the various methods are within the range of accuracy indicated by the U. S. P. dosage equivalents—and these dosage equivalents were put into the U. S. P. because representative physicians agreed to them. Furthermore, in "Useful

Drugs", a book published by the *American Medical Association* for the guidance of State Medical Examining Boards, Medical Faculties, etc., we find percentage solutions defined. We note that the metric W/V solution is accepted as being a proper solution to dispense and we feel that this sufficiently authenticates its use from the physician's viewpoint. Then, too, we find that in many of the largest hospitals physicians are sanctioning the use of the metric W/V percentage solutions.

In view of this controversy, it seems to us quite proper for the U. S. P. revision committee to take some action in the matter. The chairman of that committee, some three years ago, expressed himself as of the opinion that the matter was outside the scope of the revision committee. However, under the heading "General Notices", the term "Percentages" is defined in the U. S. P. X and in view of section 23 in "General Principles", it would appear feasible for the committee to formulate such a rule as would substantiate, officially, the use of the W/V percentage solutions in dispensing, when percentage solutions are specified by physicians on prescription. The Conference of Pharmacy Teachers of the American Association of Pharmacy Colleges has adopted the use of the method, and the National Association of Boards of Pharmacy has recommended its adoption by all State Boards. This would seem to show the attitude of pharmacy faculties and licensing boards in the matter.

Some sort of pharmacopœial sanction to the making of percentage solutions on the metric W/V basis would help to remove the antiquated empirical systems of weights and measures. These medieval systems impose three kinds of ounces on pharmacists, thereby giving rise to three kinds of percentage solutions, *as ordinarily made by American pharmacists today*. Definiteness is the soul of any scientific process. It is certainly far more important that we have a definite method of procedure than it is that we stick to a certain interpretation of the term, "per cent." We can standardize that term as applied to W/V solutions and it will still mean what the dictionary says it does, viz., by the hundred. At the same time by officially confining the method to the metric system we shall have left behind quite completely all vestiges of the cumbersome, inconvenient, out-of-date systems. We believe it high time to align ourselves with a modern, vigorous progressiveness.

Director of Public Health Laboratories Addresses Students

Students of the Pharmacy School were greatly favored Thursday, January 8, 1931, by a talk from Mr. E. V. Buchanan, director of the Public Health Laboratories of Cleveland. Following an explanation of the relationships between the Laboratories and the druggists and pharmaceutical houses of the City, the speaker gave a detailed account of a few of the accomplishments of the institution.

A survey of existing conditions in certain drug stores of Cleveland in 1922-23 revealed very startling facts. Where utmost care and cleanliness should have been pursued to protect public health, just the opposite conditions were found. Packages were misbranded, often where use of the contents if called for in a prescription or preparation would prove fatal; filth and rubbish littered the prescription departments; and preparations so old as to be useless therapeutically were discovered on the shelves. Close to 5,000 preparations were collected during the campaign, and orders issued to place the stores under conditions of sanitation. Reaction to the survey by the pharmacists of Cleveland may be fully appreciated when it is revealed that a similar survey was conducted again last year, and not a single bottle taken in by the Laboratories.

To further protect public health, the Laboratories maintain a check on drug products which appear on the market. If a concern or individual wishes to place a certain article up for public sale, it must submit its formula, labels, and advertisements to this department. After thorough observation and careful consideration of everything submitted, the Laboratories give their decision. If the product and claims are sanctioned, it may be marketed; otherwise it should be discarded. From time to time, someone does not take the decree of the Laboratories as final and markets the rejected article. Of course, the Laboratories may resort to law, but, according to Mr. Buchanan, the members have a better recourse than the law. Through co-operation with the city newspapers which maintain a board to check over claims made in "ads," and through the aid of druggists who refuse to purchase the preparation for resale, the manufacturers soon find themselves at a loss as how to dispose of their goods. Consequently, they and their article drop from view, and the results are accomplished without recourse to the sluggish process of the law.

As another service to the public, it is part of the Laboratories' duties to check up on prescriptions which individuals may think have been incorrectly compounded by the pharmacist. They receive their sample both from the individual and from the pharmacist, make the required analysis, and, from reports, make such adjustments as are necessary. If the druggist is guilty, suitable proceedings are entered against him; if the individual is in the wrong, both he and the pharmacist are called to the offices, and the matter smoothed out as much as possible to the satisfaction of all parties concerned.

That the Laboratories are intended as a help and not a hindrance to the pharmacists of Cleveland was stressed in conclusion by Mr. Buchanan, and to more fully impress the value of such service upon the minds of embryo pharmacists, Dean Edward Spease added a few words in which he brought out this point and thanked the speaker for his message to the students.

TERCENTENARY OF QUININE KEPT BY FIVE NATIONS

Scientists of five countries gathered at St. Louis, Nov. 1, 1930, as guests of The Missouri Botanical Garden (Shaw's Garden) to celebrate the fact that, 300 years ago, an otherwise forgotten Spaniard was cured of chills and fever by an infusion of tree bark recommended by a Peruvian native.

That cure discovered to the world a means of reducing the malaria death rate, estimated then at 2,000,000 a year. As Director George T. Moore remarked in his address opening the Quinine Tercentenary sessions, the Peruvian bark was "a plant product that has brought more comfort to mankind than any number of the modern inventions of which we are so proud, and has, indirectly at least, been the means of creating wealth far beyond anything we can imagine."

This gathering of distinguished men from Java, Holland, Germany, Scotland and the United States, it appears, sprang from the hobby of Anton Hogstad Jr. of St. Louis College of Pharmacy, pharmacognosist to the garden, for browsing through ancient books on drugs.

One night last summer, buried in the "Pharmacographia" of Fluckinger, published

at London in the last century, he discovered a story on page 342 that cinchona bark in 1630 banished the malaria of Don Juan Lopez Canizares, Corregidor of Loxa, Peru.

It was a startling paragraph. Generally it was considered that the first recognized use of Cinchona, source of quinine, occurred in 1638, when it cured the Countess of Chinchon of malaria. Dr. Hogstad reported his discovery to Dr. Moore, and browsed through other books. Ultimately they found confirmation in a recognized authority, the commentary of Hager, Fucher and Hartwich published at Berlin in 1895. Independent investigation in England further established the date. It appeared that the Corregidor had recommended the treatment to the Countess, wife of the Vice-Governor of Peru.

Coincidentally it happened that the wife and son of A. R. Van Linge of Maarssden, Holland, head of the Nederlandsche Kininefabriek, world's chief quinine manufacturer, visited Shaw's Garden. Dr. Hogstad, escorting them through the garden, mentioned the Quinine Tercentenary. At their suggestion, Director Moore wrote Dr. Van Linge, who enthusiastically took up the idea of an international observance here and accepted an invitation to speak at its principal feature, the Henry Shaw dinner at Hotel Jefferson.

Carolus Linnaeus, founder of scientific plant nomenclature, apparently did not know of the Corregidor's cure, or the Peruvian bark might have been called something like "Canizara bark." Linnaeus named it after the Countess of Chinchon. And it was he that lost the first "h," as shown in an exhibited copy of his Latin "Genera Plantarum," published only a century after the Countess' cure and describing the "cinchona" tree.

The celebration opened with a symposium on the history of cinchona as a drug, by Prof. Leo Suppan of St. Louis College of Pharmacy; as a chemical, by Dr. Edward Kremers of the University of Wisconsin; and in medicine, by Dr. George Dock of Pasadena, Cal., former professor of medicine in Washington University Medical School.

Describing its development in the treatment of intermittent fevers, "which perhaps have the widest geographic distribution of all infectious diseases," Dr. Dock continued: "Intermittent fevers affect all times, all races and all nations, Caucasians most severely and the dark races the least. Intermittent fevers were important causes of the decadence of ancient Greece, still

exist with much tenacity in modern Italy and constituted an important cause of the economic and cultural decline of imperial Rome."

Prof. Robert J. Terry of Washington University School of Medicine told the story of Dr. Sappington and his "fever pills." The cinchona industry in Java, world center of production, was described, with moving pictures, by Dr. M. Kerbosch, head of the Dutch Government plantation and experimental station.

Speakers at the afternoon session included Dr. Wilbur L. Scoville of Detroit, Dr. Frederic Rosengarten of Philadelphia, Dr. Torald Sollmann of Western Reserve University and Dr. Kenneth F. Maxcy of the University of Virginia.

Those who spoke at the dinner besides Dr. Van Linge were Dean C. E. Caspari of St. Louis College of Pharmacy, W. D. Besant, Director of Parks and Gardens of Glasgow, Scotland, and Dr. George D. Rosengarten, former president of the American Chemical Society. George C. Hitchcock, president of the garden trustees, presided.

Delegates inspected the garden and its 1600-acre extension at Gray Summit, Saturday, and in the evening were guests of Dr. Moore at a reception at his residence, in the garden.

Dr. Bacon and Mr. Edwards represented the School of Pharmacy of Western Reserve University.—*From St. Louis Post-Dispatch.*

THE NATIONAL CONFERENCE OF PHARMACEUTICAL ASSOCIATION SECRETARIES

In an article recently prepared by J. G. Beard, president of the National Conference of Pharmaceutical Association Secretaries, is found a description of the purpose of the organization. He says, "The purpose of this organization is to bring together annually for round table discussions the secretaries of the various state and local drug associations in order that, by interchange of ideas and through extended debate, each member can return to his respective association better qualified to carry out his secretarial responsibilities."

The success of any organization is dependent upon the initiative, ability and enthusiasm of its secretary. If the secretary is new to the office, he needs the experienced counsel of others of his sort. On the other hand, if he is accustomed to his duties, there is danger of

his falling into a one-way system of conducting his affairs which tends to make monotonous the conventions which originate in him. The Conference of Secretaries, President Beard emphasizes, is designed to aid the new man, and to re-inspire and give new ideas to the older man.

The Conference holds its meetings annually during the conventions of the A. Ph. A. The next meeting will be held in Miami, Florida, during the week of July 28, 1931.

Student Council News

Shortly after the class elections in the fall, the new Student Council, composed of Robert Fitch, Rufus Farris, Wanda, Baygrowitz, Ruth Kotershall, Russell McArtor, George Gerlach, Michael Lauria, Winton Webb, Saul Eisenberg, and Ted Gutkowski, was called together by Harry Valway, president of last year's Council. At the following meeting officers were elected, and a time was set for regular meetings of the Council. The officers elected are: President, Russell McArtor; Vice-president, George Gerlach; Secretary, Ruth Kotershall; and Treasurer, Michael Lauria. Ten minutes past four o'clock on every second Tuesday was chosen as the time for regular meetings.

The meeting held on Armistice Day saw Rufus Farris elected athletic manager for the School of Pharmacy, Michael Lauria appointed as assistant manager, and Ted Gutkowski as second assistant manager. The three men comprise the athletic committee. The social committee, as appointed by the president, is composed of Winton Webb as chairman, Wanda Baygrowitz, and Robert Fitch. At this meeting a motion was also voted upon and passed to present fifty per cent of the Student Council fund to the treasury of the Pharmacon.

On Thursday, Dec. 4, the Council was given charge of the assembly. Through several of its members, George Gerlach, Russell McArtor, and Rufus Farris, it endeavored to explain to the student body the makeup of the Student Council and its purpose. The athletic program for the following year was set forth, and the honor point system explained. Robert Fitch, editor of the Pharmacon, explained the purpose of the publication and some of the work connected with it. He emphasized that the paper is entirely a student publication, and urged everyone to participate in some way in the work.

Coming back to the proceedings of the Council, a great deal of discussion was heard concerning a dance for the first semester. After hearing the opinion of several of the student body, this was given up. It was decided to combine this with the dance to be held at the beginning of the second semester and make it a bigger and better party,

The bowling tournament has already started and is well under way. As an added stimulus to the interest of this sport, the Student Council has voted to set aside thirty-five dollars for awards for the winners. These awards will be divided between the first and second winning teams and the three highest individual averages. The amounts of each respective award will be determined and announced later.

The longed-for Christmas recess entered at this point, and so ended the activities of the Student Council for 1930. We are looking forward to the dance to be held at the opening of the second semester, and hope that the student body will show a great deal of interest, helping to make it a huge success.

Through this means, the Student Council wishes all a very happy and prosperous year in 1931.

Believe it or not! But our Hospital Manufacturing Department puts out between 2,500,000 and 3,500,000 compressed tablets yearly. Which is all the more astonishing when consideration is given to the fact that a single punch machine is the only means of mechanical aid in this particular line of manufacture. Contributing largely to the vast quantity of tablets is a standing order for 50,000 Sippy tablets, which must be made on the average of once every two weeks.

A life-size rubber model of the human figure, complete in every detail from the skeleton outward, has recently been finished by Dr. Loyal Clark, of Portland, Oregon. It is to be used for the instruction of medical students.

Flaps in its surface may be raised, permitting the student to see each bone, muscle, and organ in true relation to its surroundings. Various sections may be removed entirely or taken apart for study.

Use of this model, it is believed, will be of great assistance in the instruction of medical and dental students. Five years of research work were required to complete this model, the first of its kind ever made. The flexibility of the rubber simulates human tissue.

Athletics for Pharmacy

In the October, 1929, issue of the *Pharmaccon*, there was an article under the same heading by Meyer Karner. This column contained not only a request for the students of the Pharmacy School to participate in athletics, but Karner really pleaded with them to do so. Whether it was Karner's appeal or the interest of the present student body that blew the lid off athletics in the Pharmacy School is hard to tell, but, at any rate, athletics have been on an incline ever since.

In January 1930, the Pharmacy School was represented by a basketball team that was nearly unbeatable. They won their league championship, but unfortunately they lost the University championship. This team consisted of Fitch, Valway, Farris, Karner, Lauria, Lester, Celke, Kaufhold, and Miskiewitz. The members of this team were given medals for their wonderful showing, and they received much praise from the Intramural Department.

Not only did the Pharmacy School produce a championship basketball team, but at the same time it produced two boxers, both taking the 125 lb. and 135 lb. championships respectively. These boys were Joe Eisenberg and Anthony Castrovinci. Each afternoon one could have seen both Joe and Tony training until they could hardly stand on their feet. They fought hard battles in the eliminations, Tony winning two contests by decision and Joe winning his two battles by knockouts.

We regret that Tony is not with us this year to defend his title. However, Joe is back again and is keeping in trim to bring the Pharmacy School another championship. Joe knows the boxing game fairly well, and he is more than willing to train with other fellows in any weight who wish to enter the intramural boxing tournament.

Basketball privileges are extended to all students interested, and there is no reason in the world why the Pharmacy School can not produce a team this year to equal that of last year. We have the men; we have the fight! Now let's go, Pharmics, get into the spirit and show up for basketball games when the notices appear.

Since School of Pharmacy athletics broadened into participation in all sports, so Joe Eisenberg entered the intramural boxing contest. In 1929, Joe first entered, but as that



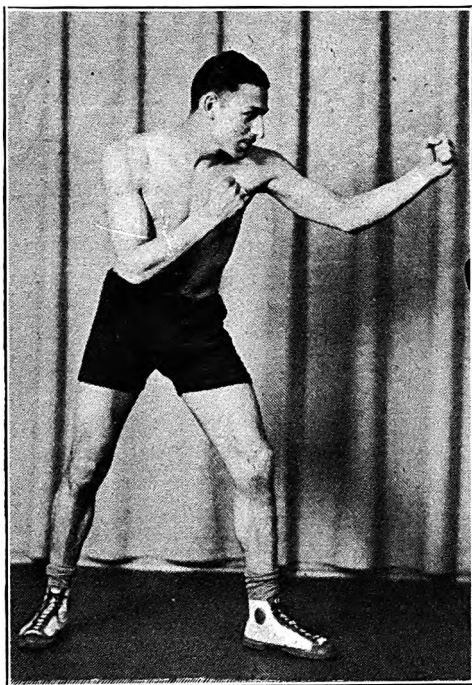
Jerome Ratner

was his initial year at Reserve, he took things rather easy and received a runner-up medal for his efforts. During the season he fought three battles, winning two by knockouts and drawing the third, but losing in the fourth round to Disantis.

With more determination to win in 1930 under the management of Meyer Karner, Joe trained consistently, and he came through the tournament with a perfect record. This series of contests seemed easy for Joe, for he had only two battlers to encounter. The "Pill Peddler", as he was called by the Adelbert men, knocked out Pedley in the second round of the semi-finals, only to meet Houston in the finals and win in the same manner. The first round was even, but in the second Joe came from his corner and in a few seconds his opponent was stretched on the floor, the result of a left to the heart and a right to the jaw.

In February 1931, Joe expects to enter the contest again, but at a disadvantage. He plans to enter the 145 lb. class instead of the 135 lb., for he finds it quite difficult to keep his weight below 140 lbs.

We nominate Jerome "Bull" Ratner as a most heroic lad and football star of the Pharmacy School. He was right in there holding back the lines of Pittsburgh, Carnegie Tech,



Joe Eisenberg

Ohio University, and others. Jerry played on the line in every game last season, and he showed his football ability by remaining in each game at least three quarters. Unfortunately for the team as a whole, they lost every game but one. However, if any of our readers saw the games they'll remember that our delegate was in there fighting every minute and taking his man out as he was instructed.

On behalf of the Pharmacy School, we congratulate Ratner for his fine showing during the past football season, and we hope that his success may grow greater and greater each year that he participates in the sport.

More Pharmacy ability was recently shown in intramural athletics when Obester formed a baseball team composed of Lauria, Perifano, Kroeger, Liner, Spitz, Miller, Sabo, Bellan, Gerbino, Hirsch, Gismondi, and others. As a start, the boys trimmed the Y. M. C. A. team by a score of 17 to 8. The Deakes were next in line to suffer defeat by a score of 18 to 3. The Pill Rollers met defeat, though, because all the boys did not show up for a game, and they fell before Sigma Chi by a score of 25-10. All in all, good sportsmanship and cooperation were shown, the end of the baseball season appearing with the boys chalking up a percentage of .666.

School Statistics

Some of our readers are interested in statistics from the School, and so we thought it of enough importance to quote some that seem to be of interest.

Records of the early years of the School are not entirely complete because of the fact that its beginning consisted largely of a few lectures, and degrees were not granted, and, doubtless, certificates were not issued to all who attended.

We feel that our list of graduates is almost complete. But of former students who did not finish the course the list is incomplete, and we send mail to those upon that list who have signified their desire to hear from us.

We have a card file of about 850 names of graduates and of former students. We have an active mailing list of 662 alumni from whom mail is not returned and 129 more whose addresses no longer are correct, so our list of graduates is about 790.

We are working upon this list now and hope that by another year no one who wishes to be upon our mailing list will be neglected.

We sent out an "orange sheet" recently, and the results have been very satisfactory. The number of blanks mailed was 662. We have received 279 replies, and they are still coming in. We consider an immediate reply of 42% to be quite good indeed.

The replies upon this "orange sheet" were very interesting. Of the 279 replies received, 187 wish to receive both our annual catalogue and each issue of the PHARMACON, 51 wish the PHARMACON only, and 18 wish the catalogue only, and there are only 23 who care to receive neither publication.

Comments or "little notes" appeared upon 58 of the returned sheets, and only two could have been considered to be adverse comments. We greatly appreciate the comments made and the advice given, and we assure our readers we were pleased to receive them. We shall appreciate any communication from our readers that will be helpful to us—births, deaths, marriages, successes or failures. Send in the news, not only to keep our files up to date, but so it may be passed on to our readers. We received the names of more prospective students than we have enrolled as a freshman class for two years. This is a most hopeful sign because it is our alumni who should send us students. We are here to serve you and want to be given the opportunity to do so.

In our "orange sheet" we did not ask for subscriptions to the PHARMACON because we don't want them to become a duty. We do, however, appreciate receiving them, for loyalty plus money is the finest thing we can have. Therefore, be it resolved that we wish to bestow the crown of honor and devotion, figuratively, with palms and without psalms and express our thanks to James B. Jewell, '25, David R. Chase, '23, and Frank H. Weis, '22, in the order named.

IODINE

It is quite interesting to us to observe the large number of inquiries we have received recently about Iodine.

In the October issue we carried an article about Iodine in colloidal form. Since then, we have become interested in the new uses to which such a large number of forms of Iodine are being applied that we thought our readers would like to know about them, and perhaps better still, know where to get first hand information.

Those of you who are in neighborhoods where veterinary and poultry remedies are employed should be much interested in Iodine.

There has been formed what is known as the Iodine Educational Bureau at 64 Water Street, New York City, for the purpose of disseminating information about Iodine. A letter to this address will bring at least two booklets to you, the one, "The Conquest of Infection," which has already been furnished to many druggists for distribution to the laity, and the other, "The Uses of Iodine and its Compounds in Veterinary Medicine."

This Bureau will also be glad to answer any specific questions our readers would like to ask of it.

We shall be happy to serve our readers with such aid as may be in our power to offer in regard to the references found in the good list in these pamphlets. Our library is at your disposal.

WRONG DIET

Eskimos spoil their teeth eating white men's food, and white men injure their kidneys eating Eskimos' food. During the last two generations of Eskimos, children and young adults around Nome, Alaska, have begun to show

cavities and other signs of decay because of their newly imported diet, claims Henry B. Collins, Jr., of the Smithsonian Institute, Washington, D. C.

For six months a laboratory worker at the University of Michigan lived on a diet of which thirty-two per cent was lean meat. Dr. L. H. Newburgh of the University Medical Department found that at the end of the six-month period the laboratory worker had symptoms of a kidney disease. As soon as he varied the all-meat diet, the trouble disappeared.

Another Side Line for the Druggist

Jesse T. Turben, 52, and Miss Leota C. White, 48, both of Long Bottom, O., yesterday did not marry in an airplane or a taxicab or by telegraph, but they chose Z. W. Kobylanski's drug store, 3240 Superior Avenue N. E., for their wedding ceremony, only a few hours after the bridegroom's divorce from a former wife had been granted in Common Pleas Court here.

Kobylanski, who said he had become accustomed to demands for anything from flypaper to automobile tires, was startled when Joshua Turben, brother of Jesse, stepped up to the counter and demanded a justice of the peace.

"What do you want with a justice of the peace here?" the druggist asked.

"I've got a brother who has driven 250 miles since 3 o'clock this morning to get married," Turben replied. "Can you fix it up?"

Although marriages aren't in Kobylanski's druggists' supply catalogs, he finally reached Stephen G. Vamos, justice of the peace, with offices at 1221 Ontario Street, who drove to the store and married the couple at 6:30 p. m., just as pangs of hunger were beginning to persuade them to dine and be married some other place later.

"I've performed plenty of unusual marriages," Vamos declared after pronouncing them man and wife, "but this is the first one in a drug store."

Turben and his bride are engaged in home missionary work, and Turben is an ordained minister, he said. In his twenty years of activity in this field, Turben said, he has traveled from one end of the country to the other.

He drove from Long Bottom, a mile or two from the Ohio River, through the early morning in order to receive his divorce decree in court before noon. The marriage was also Mrs. Turben's second.

—Cleveland Plain Dealer—October 28, 1930.

ALUMNI

Mr. Lawrence H. Baldinger, B. S., who graduated from the School of Pharmacy in 1929 and immediately assumed duties at Notre Dame University, recently corresponded with the Editor of the PHARMACON, informing him of some of the activities which now occupy his time at South Bend.

In addition to teaching analytical pharmacy, pharmaceutical Latin, and dispensing pharmacy, "Baldy" is carrying four subjects in the graduate school. Which is plenty of work, according to Lawrence. But the silver lining appears in the fact that he expects to receive his Master of Science degree in June, 1931, and, on behalf of the student body, the PHARMACON takes this opportunity to wish Mr. Baldinger much success in his undertaking.

Last, but by no means least, we must mention a duty which calls for lots of activity on the part of Mrs. Baldinger (formerly Helen Dwyer, of Sistersville, West Virginia). Mr. and Mrs. Baldinger are the proud parents of a baby boy, Lawrence H. Jr., who was born August 16, 1930, at St. John's Hospital, Cleveland. Whether or not he will follow in his dad's footsteps has not been definitely decided, for Junior is still a little young to make decisions of such important bearing.

Arthur K. Justus, '16, represents the Reese Chemical Company of Cleveland and visits every town of over 1000 population in Ohio, Indiana, Illinois, Michigan, Pennsylvania, New York, New Jersey, Virginia, Delaware, Maryland, and West Virginia. He reports that wherever he finds an alumnus he is a successful one.

James Crosser, Jr., '07, is Special Industrial Representative for the Arco Company, paint manufacturers, of Cleveland. He is located at 6546 Kenwood Avenue, Chicago.

George N. Case, Ph.C., 1911, is chemical engineer for the Green Oil Soap Company in Chicago.

We are sorry to note the death of the wife of Joe McElroy, who graduated in the class of 1929.

Mr. and Mrs. G. C. Kostell (Carol Pritchard), 3607 Thornhurst Drive, Garfield Heights, are the proud parents of a daughter, Joan Carol, born November 5th, 1930. Mr. Kostell is doing graduate work in the School of Pharmacy.

T. V. Sords, '22, is Secretary of the Passivation Products Company, Manufacturing Chemists, makers of Boiler Treatment and other products.

"More alumni notes in the Pharmacon."
Will you send some to us?

"How to pass the State Board?"
As this was a joke and not a criticism, we must answer in kind, "Takeag odd rinko flicker."

"Are there any of the Alumni who are making money?"
One of them drove a Lincoln to the School the other day. We presume it is paid for.

"Why not have the seniors join the Alumni Association immediately upon graduation?"
We do when they have the money.

"I enjoy reading your PHARMACON very much and would thank you for keeping my name on your list."
Again—God bless you, but why "your Pharmacon?"

"Do something to create and add dignity to the profession of Pharmacy."
Why not send us a letter or an article outlining details?

"Four year course—very good."
God bless you.

"I enjoy reading the PHARMACON and thank you for the copies I have received."
The Editor's chest swells out and his head raises another inch.

"Why not hold class reunions?"
We are reserving two plates for you for June 17, 1931.

"About time Western Reserve built a new Pharmacy Building."
We must agree with this.

"I am constantly reminded of the necessity for maintaining a closer contact between the School of Pharmacy and Pharmacists of this City. Be it strictly professional or only commercial Pharmacy, one cannot benefit at the expense of the other without a loss to both."
We heartily agree. We try to do our part. Will you show us how to do more?

"Don't criticise our profession with cheap jokes about a registered druggist serving sandwiches, etc., as recently appeared in the PHARMACON."

We are sorry it slipped by, for we agree with you. It will not happen again.

"What is the need of turning out more druggists when there are hundreds now who cannot find a job, or make a decent living in Pharmacy? Close the Schools for about ten years and give Pharmacy a chance to absorb its excess members."

As usual, we should like to argue this, but space forbids.

"The School needs a model drug store which would be the most efficient way of bringing the student into close contact with his chosen profession."

We have the plans and all we need now is the money.

"I am pleased to note the progress that has been and is being made by the School."

We appreciate kind words.

One writes, "Why do out-of-town candidates receive preference as to scholarships?"

All but two scholarships, given upon competitive examination, now are held by Clevelanders.

"I would suggest that the School advertise, or in some way attract more out-of-town students."

We personally visit all out-of-town high schools to which we are invited.

"It would be interesting for some of the alumni who have attained prominence to contribute an article now and then to the PHARMACON."

Good suggestion. Send your article in.

"Your work has been aggressive, and I know that you have raised the standard of the School till it ranks next to Philadelphia."

Philadelphia College of Pharmacy please note.

"Where is my alumni certificate?"

Referred to alumni secretary.

"The PHARMACON is a very worth while publication."

Again ye editor swells up with pride.

KAPPA PSI NEWS

When the first few weeks of the semester had passed and the smoke of battle had cleared, Beta Beta Chapter emerged with ten new pledges among the men who entered Pharmacy School here for the first time. Considering everything in general during this era of depression, we are quite proud that so many were pledged. And equally proud are we of the men, it giving us great pleasure to list as charges of Kappa Psi the following: Barney Perifano, Ray Stemple, John Bellan, Jack Meresicky, Theodore Gutkowski, Ivan Kordich, John Pansky, Ben Parkin, Emory Sobonya, and Julius Szabo. Of this number, the first four mentioned are living at the fraternity house.

It is noteworthy also that eight men are living at the house this year. In addition to the four pledges, Brothers Celke, Sabo, Webb, and Kaufhold make 1619 East 117th St. their permanent residence. Brother Karl Schweickardt, who was forced to discontinue his studies recently due to ill health, was also among those living at the house, but he frequently comes over from Pittsburgh to spend a few days with the boys.

While the social events of the year have not been many, they have been quite well attended and highly enjoyable. Besides a house dance held October 31, 1930, in honor of the pledges, and at which about twenty couples were present, the Chapter staged a smoker Tuesday, December 2nd. This was the first of a series to be held the first meeting night of every second month. In spite of extremely disagreeable weather, a fair representation of the alumni turned out. Included were Brothers Hickernell, Bovee, Streng, Young, Porter, and several others. While part of the evening was devoted to a short business meeting, the major portion was spent playing bridge, poker, pinochle, etc.

Wednesday, November 26, 1930, should be long remembered by all those who partook of the special Thanksgiving dinner at the Chapter House. Fried chicken, heaps of mashed potatoes, cranberry sauce, and apple pie and ice cream give some conception of the trimmings which filled the table. Sound good? We'll assure you it certainly was! About thirty men were served, including Professor Chamberlin, Professor Davy, Brother Edwards, and Brother Stockhaus of the faculty, and Brothers Neely and Porter of the alumni.

Tentatively, initiation of new men has been planned for Friday, February 20, 1931. A week previous to this date would furnish an ideal atmosphere for such an occasion, but it appears too close to the opening of the second semester. But, at that, too much fear must not be instilled into the hearts of the fledglings by selection of such a date.

Brother Brooke Phillips, June, 1930, is now located at City Hospital, where he is in charge of the dispensary. Following his registration last June, he worked in Salem until he assumed his present position recently.

Brother Karl H. Driggs, who for the past two years has been in charge of the Cleveland territory for the Richard Hudnut Co., is at present head of the same area for the Sharp and Dohme Co. of Baltimore. Karl held the same position several years ago for H. K. Mulford before this concern was taken over by Sharp and Dohme.

Pledge Jack Meresicky has turned his attentions toward dramatics. As a member of the Sock and Buskin Club, he played an important role in "The Racket," which was presented recently.

ALPHA ZETA OMEGA NEWS

Following the footsteps of fraters of '23, '24, and '25, our great friend and frater Roy Scott vowed to love, honor, and obey Sylvia Brondfield, who is now Mrs. Roy Scott. Good luck, Scotty old boy, and may good fortune and happiness be your middle name.

We are happy to again say that fraters Max Cohen and Morris Klein are still plugging along in the medical schools of Maryland and South Dakota, respectively, and they are still displaying the scholarship and work for which they were noted in pharmacy school.

Frater Morris Spiegel, '26, is now owner of the L & S Pharmacy.

Frater Max Reiner is the present manager of the Kutler Drug Co.

Frater Joe Eisenberg is enjoying an assistant manager's position at the Euclid Pharmacy.

Frater Albert Fine is still employed by the Marshall Drug Co. He is now assistant manager of the Eddy Rd.-Arlington store.

On December 11, the boys enjoyed a luncheon at Wille's Lake Shore Gardens. The married men were allowed to bring their wives so that they could stay longer and enjoy themselves at bridge.

Hallowe'en night found the fraternity members at Fowler's Mills, Ohio, where they danced the evening away to the tunes of the Euclid Park Orchestra.

The annual Pledge Dance was held Sunday, January 18, at the Hollenden Show Boat. Those on the committee were Joe Eisenberg, chairman, Ernest Gross, Herman Gerson, Abe Harris, and Al Fine. Entertainment was furnished by Bill Fayen's Orchestra, and the pledges supplied the wit and humor.

Our new location is at the University Apartments on East 107th St. off Euclid.

PHI DELTA CHI NEWS

Alpha Alpha has a fine pledge chapter this year composed of Charles R. Bennett, Gerald Nelson of Findlay, Orville Hagee of Akron, Kenneth Gerber of Canton, and Joseph Massey of Cleveland. Bennett has had two years at Wooster College, and Nelson has had a year at Findlay College. Edward Fitzgerald has dropped from school, but probably he will be back in the fall.

The active chapter at present is composed of Kenneth Lautenschlager of Akron, Edwin Miller and Robert Kumpf of Canton, Allen Armstrong of Lisbon, George Bruehler of Port Huron, Michigan, and Nelson Rauschkolb, Nelson Schroeder, and Laddie Sedely of Cleveland. Nearly all of these men live at the chapter house.

The regular semi-annual election of officers was held on December 18. The following men were selected by the election committee, composed of Brothers Schroeder, Sedely, and Bruehler, to serve during the ensuing semester:

Kenneth Lautenschlager, President
Allen Armstrong, Vice President
George H. Bruehler, Secretary
Laddie D. Sedely, W. M. A.
Nelson Rauschkolb, W. I. G.
Nelson Schroeder, W. P.
Robert Kumpf, Council Delegate.

Brother Ed Miller will continue to be treasurer for one more semester, and Allen Armstrong will act as steward. Brother Lautenschlager should make a very capable leader, as he has been closely associated with the handling of fraternal affairs for several years. The new president is a member of the Junior class, and will graduate in June. Good luck to you, Ken, the reins are yours.

Phi Delta Chi was represented nationally by L. C. Heustis at the National Inter-Fraternity Council, held at Hotel Statler in Cleveland on November 27 and 28. We were also represented at the National Inter-Fraternity Alumni Council, held in New York City on the same date.

The annual Grand Council of Phi Delta Chi convenes this year at the Deshler-Wallick Hotel in Columbus, Ohio, February 23, 24, and 25. A delegate will be sent from each active chapter and many chapters also send an alumni delegate. Brother Robert Kumpf will represent Alpha Alpha Chapter, and it is thought that several other members of this chapter will attend the sessions. Brother Edward Spease, who has been Grand President for several years, will preside at the meeting. The 1932 Council will be held in Los Angeles during the Olympic Games.

The social calendar of the chapter for the present semester is practically devoid of dates, except for one house party held in November. This party was held primarily for the actives and pledges, but several alumni were present, including Brothers Richard Koch, Walter Wargell, Norman Anderson, Donald Kessler, and Stan DeVille. The party was a very successful affair, arrangements for it being made by Brothers Patronskey and Bruehler. These men certainly have the formula for real entertainment.

Again the bowling tournament is in full swing. We have entered a team composed of Brothers Bruehler, Lautenschlager, Rauschkolb, and Sedely. We have not yet organized a basketball team, but several of the boys are practicing in the University gym one night a week. Some of the boys, Bruehler and pledge Gerber, play on the Pharmacy School squad.

ALUMNI NEWS

Brother N. T. Anderson remains a member of the University, having registered as a freshman at the Dental School. He was recently pledged to Psi Omega, dental fraternity.

Brothers Ischie and Highland have motored to Florida and thence to Havana, Cuba. They will return to Cleveland about the middle of January.

Brother Henry Kumpf is now working for Brown Drug Inc. of Alliance.

Brothers Cook, Kutler, and Highland are living together in an apartment on 93rd St. These men are all working for the Marshall Drug Co.

Brother Paul Cusick is now connected with the Miller Drug Co., being at the Cedar Ave. store.

Brother Wm. Marlowe is manager of the Dover store of Smith Inc.

Brother Walter Wargell remains with Sharp and Dohme, and Bob Milliger, with Upjohn Company.

Brother Clarence Speice is working in East Cleveland with the Warren-Levitt Drug Company. Clarence is planning on entering medical school in Texas next fall.

Brother Adelbert Patronskey may be called an alumnus, but is almost as busy as an active. Pat is working at Miller's store at Shaker Square. He is planning to return to school in the fall.

Brother A. E. Kuchta is now working in an office in the Locomotive Engineers Building. Al may return to school next September.

Brother Lawrence Baldinger remains at the University of Notre Dame. "Baldy" spent a few hours with us on a recent trip through Cleveland.

Brother Koch remains at the pharmacy of the Cleveland Clinic.

Brother Stan DeVille of Meadville, Pa. is spending his third year at the Medical School of W. R. U.

Brother Stimson is still at the pharmacy of the University Hospitals. Stimson is a member of the Pharmacy faculty bowling team.

Brother Michael Gayok is assistant manager at Marshall's store at 93rd and Union.

Brother Henry Gallagher is still working with Brothers Webster and Miller at the Standard Euclid and Page store.

Brother George Brown of Youngstown now has his own store and is experiencing much success.

Brother Wm. Brown still operates two successful stores in Lorain.

Brother Donald Kessler is quite well satisfied with his new position as manager of the Marshall store at Detroit and 117th St.

Brother Adam Rudibaugh is doing nicely with his store in Lisbon, Ohio.

Brother Carl Shane remains with the Roth and Hug Drug Co. of Canton.

Brother Paul Hawk of Akron and his wife were recent visitors at the house. Paul is connected with a mattress firm of Akron.

Brother Paul Steidl recently spent several days with us. Paul is doing nicely with a store in Cuyahoga Falls.

Brother Schreiner remains with the Standard Drug Co. at the Detroit-Clifton store.

Brother Schlosser still operates his own store on W. 25th St.

Brother George K. Bruehler is working for the White Cross Drug Co., part time in both of its stores.

Brother Kibler is still with the Standard Drug at Euclid and 14th St.

Representatives Charles A. Smullen and Fred W. Smullen of the *American Druggist* were present at the student assembly, November 13, 1930. The former, who is the circulation manager, spoke at the assembly.

The *American Druggist*, Mr. Smullen believes, is the finest trade paper in the pharma-

ceutical world. It presents subjects of economic value to the pharmacist, and does so in a manner that is interesting and readable—along the same lines that the popular magazines offer their material to the general reading public. Using the November issue as an example, the speaker hastily reviewed the contents and showed clearly the great contrast between the *American Druggist* and the usual trade journal which embodies only a multitude of figures and market reports.

Especially did Mr. Smullen stress the importance of the pharmacist maintaining himself on an "up to the minute" basis through the medium of the journals of his profession. In the speaker's words, "The wide-awake pharmacist must keep up with the evolutionary education of the day, and no better means offers itself than the journals of the profession."

NOTICE!

Annual Mid-Semester Dance

The Alumni of the School of Pharmacy are cordially invited to be the guests of the Students and Faculty. Kindly notify the Registrar by postal card or telephone, if you will attend.

Hotel Statler

Monday Evening, Feb. 9, 1931

EXPRESSED OIL

"Has that expert in farm relief been of assistance to you?"

"Some," answered Farmer Cornloss. "He showed me where I can put a good golf course on my land as soon as I can afford to play the game."—*Washington Star*.

"Papa," wrote the sweet girl, "I have become infatuated with calisthenics."

"Well, daughter," replied the fond papa, "if your heart's set on him, I haven't a word to say, but I always did hope you'd marry an American."

Farmer: "An' 'ow be Lawyer Barnes doin', doctor?"

Doctor: "Poor fellow! He's lying at death's door."

Farmer: "There's grit for 'ee—at death's door an' still lyin'!"—*Hidden Treasure*.

A woman arriving in this country after a short visit to the continent was asked the usual question by the customs official at the landing port: "Anything to declare, madam?"

"No," she replied, sweetly, "nothing."

"Then, madam," said the official, "am I to take it that the fur tail I see hanging down under your coat is your own?"—*Tid Bits*.

Sandy, crossing a bridge on a trolley car, was asked for his fare, ten cents. He only had a nickel, and, after threats, agreed to be thrown off half-way across the bridge. About 50 yards farther on, his large grip was thrown off, and rolled off the bridge into the river below. Sandy, leaning over the rail and looking below, was approached by a policeman. "What's the matter, my good man?" Sandy told him about being thrown off, etc. "Are you hurt?" asked the kind officer. "No, but I'm afraid my son is drowned."

"What is your religion?" the recruit was asked.

Promptly and smartly came the answer, "Militia, sir."

"No, no; I said 'religion.'"

"Oh 'religion,' sir. I beg your pardon. I'm a plumber."—*Boston Transcript*.

"Has anyone seen Pete?"

"Pete who?"

"Petroleum."

"Kerosene him yesterday, but he hasn't benzine since."

Prof.—Your explanation is as clear as mud.

Student—Well, that covers ground, doesn't it?

Doctor—Your trouble, madam, seems to be due to an excess of adipose tissue.

Patient—Goodness! I wonder if that isn't what makes me so awfully fat?

"Are you a pharmacist?" she asked the young man at the soda fountain.

"No, madam," he replied, "I'm a fizzician."

A little birdie told me what kind of a lawyer your father is.

What did the birdie say?

Cheep, Cheep.

Well, a little duck told me what kind of a doctor your father is.

Ever have a case of athlete's foot?

Yeah! Once when the fullback caught me out with his girl.

Patient—Oh, doctor, I forgot to ask you about that medicine you gave me.

Doctor—Well?

Patient—Do I drop it in my eyes before or after meals.

I understand you have a new car.

Yes.

Do you drive it yourself?

Nobody drives it—we all coax it.

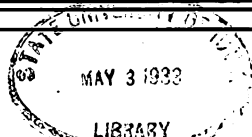
It was midnight. A voice from a far away bedroom:

Son—Hey! There's a man in the house.

Father—Where?

Son—Right here. I'm 21 tonight.

It is better to have loved a short girl than never to have loved a tall.



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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

The Professional Society

By Dr. A. B. Denison, of the University Health Service

Delivered before the Cleveland Branch of the American Pharmaceutical Association

The subject assigned me by your Committee is so broad in all its implications that it would be hopeless to try to cover it in anything short of a volume or series of volumes. In the very beginning we must face the fact that the very term, "professional society," is one that needs and requires some form of definition. So far as I know, the only way to make clear just what one does mean by "professional" is by analogy and example. So, if you will bear with me, I will try to make clear what I mean by the term "professional society" by indicating the aspects of the medical profession that entitle it to use the term in relation to itself.

The medical profession as it stands today is the net result of countless ideas, numberless additions, and multitudinous subtractions. But throughout all these changes runs the central stem of one fixed and continuous purpose and ideal. Since the earliest dawn of medical history, the idea stands out that the alleviation of human suffering is an objective worthy of our efforts. This has remained unchanged throughout medical history. In the effort to attain this end, many things have been done that very seriously curtail the doctor's income, but this has not prevented the movement in the direction of increasing the profession's usefulness. Preventive medicine certainly tends toward the elimination of the medical group, and that suggests a possible definition of a profession if one were to be bold enough to take the risk of committing himself. A profession is a group whose activities tend toward a goal that will ultimately eliminate the reason for its existence. It is true that there is no immediate prospect of this taking place, but still the tendency is in that direction, no matter how distant the goal.

Further, the medical profession has as one of its basic principles a strict adherence to the scientific method—careful, patient, painstaking observation, accurate correlation of facts, careful deductions, abundant self-criticism, and the ability to recognize facts even though they upset all previous plans and calculations. The willingness to invite critical judgments on any idea is but part of the scientific method.

A profession, furthermore, must combine a conservatism that requires definite proofs with an adaptability and progressiveness that enables it to adjust itself to the conditions under which it must do its work. If it fails in making this rather difficult combination, it either loses prestige for having lost some of its basic principles or, in an excess of conservatism, it finds itself ignored and its rightful place of leadership usurped by a group or groups that are not qualified by training or by temperament to lead. So, I feel very strongly that a profession must assume the rather thankless task of leadership. It must be the mutual interpreter between scientific progress in its field and the public that it serves. It is not an easy task by any means, for leadership means criticism and not always financial reward.

The professional society, to revert to the title of this talk, must of necessity be the visible and tangible expression of the ideas and thoughts of the profession it represents. Its task is the concrete interpretation of its professions, tenets, and ideals to the public.

But all this is generalization and is probably old stuff to all of you. I thank you for your consideration in permitting me to go over such old familiar ground. I do think it was necessary in order that you might know what I had in mind. Now let me try to make clear how I think it has a bearing on pharmacy.

There has always been a close parallelism between pharmacy and medicine. This must be if either group is to progress. There has always been a desire to recognize illness and give something for it. Probably there always will be. Even today we have all sorts of cults and methods of diagnosis and very few drugless healers. But there is one essential difference in the dark ages when the grandmother made the diagnosis and had recourse only to home remedies, so-called. Nowadays, while the desire for self-diagnosis is just as strong as ever, and incidentally just as fraught with potential danger, the grandmother goes to the drug store and purchases her drugs—not always as harmless as her previously used herbs. And right there, to my mind, is the beginning of the divergence of the ways of pharmacy and medicine—the two groups that should always go hand in hand.

Pharmacy as pharmacy has no justifiable reason for its existence independent of the medical profession. That is not said in any way to minimize the tremendous value of pharmacy both to the community and to medicine. But when it does so spread itself out so as to be able to exist independently, then it is not pharmacy in the true sense of the word. We have but to look around us to see what I mean. I verily believe that if the profession of pharmacy is to continue to live as a professional group, it must face this alternative. It must partake of the same ideals and principles and ethics that the experience of the medical profession has shown to be necessary for its existence and growth as a profession. To a certain extent it has done this, but it has only started. The development of the department store type of drug store represents not the development of pharmacy as a profession at all. Rather, it represents the commercialization of a fine ideal that makes the public lose faith. It is not without significance that so frequently we see a sign telling us that prescriptions are carefully compounded. I can conceive of no necessity for a real pharmacy to exhibit any such sign. It goes without saying.

This submergence of the professional side of pharmacy under the rising tide of the commercialized department store type of drug store has as its natural result a growing lack of confidence on the part of the medical profession and the public. We have seen the necessity of sticking to our high

ideals of the scientific practice of medicine and it is very disturbing to see our closely allied group apparently loosening its own grasp of scientific principles. Too many times do we hear a physician specifying a certain druggist because he knows what he is getting there. It ought to be that he would know it in any drug store.

This situation has a very real peril in it to the individual drug store. Coincident with the growth of the general store idea in drug stores has been the growth of the detail man from the large pharmaceutical houses. Apparently these houses do see that the situation offers a great opportunity to them. They realize that the average drug store does not present the scientific background that can offer to the physician a court of last resort that he can turn to for aid and advice.

It is true that the detail man does tell the physician that his particular product can be purchased from such and such drug stores. But the transition from compounding a prescription to dispensing a product hardly represents any progress in pharmacy. A man does not require any particular scientific training to pour from one bottle into another. He needs only to be able to read, and yet why do so many physicians specify products by name? Simply because the individual pharmacist has made no effort to demonstrate his understanding of the scientific principles involved in the use of any product and his ability to compound it. Take the barbituric acid group for instance. We prescribe Dial, or Peralga, or Allonal, or Alurate simply because we have been educated to the names by the pharmaceutical houses without any effort being made by the pharmacists to teach us what they are and how and where to order scientifically.

I believe the next logical step will be for the individual druggist to degenerate to a dispenser and not a pharmacist at all unless pharmacy as represented by the rank and file of druggists wakes up to the fact that its leadership in scientific pharmacy is slipping.

I realize that this has the ear marks of a scare head, but I believe that one can secure aspirin in most grocery stores and some filling stations. Allonal and Veronal are not yet there, however. If it had not been for the selling of the name, this situation would never have arisen.

And, since the drug store has become the dispensing station for a standardized product, it will be only a short step until the physician is buying direct from the manufacturer and dispensing his own medicines with assurance as to what his patient is getting, and, incidentally, with profit to himself. And this latter state of affairs is not impossible as anyone of you who has lived in the country knows perfectly well. It is a very deplorable thing, but all too frequently the illness must be catalogued and treated according to the medications the detail man has sold to the physician. Fortunately, we have gotten away from that in the larger centers of population, but the druggist selling electrical goods and tires is not particularly helpful in keeping us away. I am not so sure that the pharmaceutical houses would lose any sleep over a return to the physician dispensing stage. Physicians are human enough to be not exactly adverse to selling drugs at a profit.

To my mind the formation of your group here represented tonight, emphasizing as it does the professional aspects of pharmacy, is a most excellent thing indeed. I think you deserve credit, but I think also that the formation of such a professional group adhering closely to the scientific side of pharmacy was an inevitable step in the development of pharmacy if the individual drug store is to continue to exist. The formation of this group with a clear conception of the meaning of pharmacy was the first necessary preliminary step to regain the confidence of the public and the medical profession. Without this confidence you can never regain your leadership. The establishment of the professional aspect of pharmacy is vital to the existence of pharmacy.

But, having made a start, you must expect a long and stormy journey. You must accept limitations of methods that the commercialized drug store will not recognize. You must expect no aid from the large pharmaceutical houses—in fact, do not be surprised if you meet opposition. Still I fancy that you could learn much from these large manufacturers. Be equally well informed about medical research and pharmacy's relation to it. Have on file and available literature on all phases of pharmaceutical research and progress. Educate the physicians of Cleveland to the recognition of the existence of a point where they can go for information on anything and every-

thing relative to pharmacy and drugs and therapeutics. Establish direct contact between physicians and the individual members of your society. Let the physicians know what you have available, what you stand for, and what you are equipped to do.

As to the technique by which this may be accomplished, I have no positive information to offer. However, if the detail man has proven to be profitable to the large houses, I would be inclined to believe it might offer something of value to you as a professional group. Instead of selling one product, he would sell the one idea that your professional group represents the scientific side of pharmacy. He would have to have a broad understanding of pharmacy and medical research and its relation to pharmacy. His office would have to have available a wide variety of material for reference, but I believe that some such scheme would help restore the confidence that is so essential.

As a professional society you can do this. As individuals it would be difficult to attempt it. As I said before, the professional society can and should stand as the concrete and tangible evidence of an ideal within a professional group. In point of fact, that represents about the only justification of such a society.

I have always had a very personal interest in pharmacy, so if my short talk seemed at times to be rather critical, please attribute it to an excess of interest rather than a desire to be merely a fault-finder.

RECENT PROGRESS OF THE METRIC SYSTEM IN THE UNITED STATES

By Arthur E. Kennelly

A paper presented before the Metric Association, at the Cleveland Meeting of the American Association for the Advancement of Science, December 29th, 1930

The Meter and its twin sister, the Gram, are steadily conquering in United States. In order to realize this, it is only necessary to review the continued advance of the metric system among us during the last few decades.

Fifty years ago, a knowledge of the metric system was practically confined to scientists. Nowadays, it is hard to find a newspaper in North America that does not refer daily to the meter, if only in connection with radio broadcasting. At the present time, nearly all in-

telligent people know that the meter is an international measure of length, or world yard, a little longer than our yard, being nearly equal to forty inches.

United States Already Partly Metric

Many persons imagine that because the meter and gram are not in general use here, that this is not a metric country. A little examination will show, however, that this is a mistake. The United States is already partly metricized, or partly uses meters and grams. It appears to be in the course of transition to complete metric adoption, so that it is only a question of time when it will be wholly metric.

The Meter and Gram in American Science

At the present time, all American science uses the metric system. All physicists and chemists use it. No one could expect to secure a position as a measurement assistant in an American physical or chemical laboratory without knowing how to use the meter and gram. These are easily learned; because they are decimally divided like our dollar, into *decimes* or *dimes* (decimeters and decigrams), *cents* (centimeters and centigrams) and *mils* (millimeters and milligrams) but a person entirely ignorant of these names and relations would be unable to understand modern scientific measurements. Moreover, since science is not the exclusive property of any one country, but pertains to the world at large, it is natural that scientific facts should find current expression in the international metric language of the world.

The American Association for the Advancement of Science has passed resolutions favoring the use of metric units in the papers presented to it.

The Meter and Gram in American Engineering

In electrical engineering, as practiced in the United States, and in all other countries, the special units used, such as the *volt*, *ampere*, *watt* and *henry*, are metric, being directly based on the centimeter and gram by international agreement. The unit *henry* in honor of the American scientist, Joseph Henry, is one of these metric units, and was adopted at the International Electrical Congress of Chicago in 1893. All students of electrical engineering have to learn the metric system of measurement, in order to apply these metric units,

which permeate the literatures of electrical and chemical engineering. The watt and kilowatt (abbreviation for one thousand watts) are not confined to electricity, and are spreading into other branches of engineering in this country.

The Meter and Gram in American Industry and Business

Although the industries of this country are at present in the main, non-metric, there is one which was formerly entirely non-metric, and is now entirely metric; i. e., the industry and accompanying business of spectacle lenses. When anyone in the United States (or in other countries) consults an oculist, for correction of vision by glasses, the oculist measures the vision in metric units, and prescribes lenses in the same. The optician executing the prescription grinds, adjusts and tests the lenses in metric units. There are many opticians still living who formerly worked under the original non-metric system of lens production. The consensus of their opinion is that the metric system is better, simpler and international. There does not appear to be the least likelihood of the industry reverting from the meter to the inch.

The millions of bills that are presented each year in the United States, for the supply of electric light and power, are made out in terms of the kilowatt-hour, a metric unit.

There are also some American businesses that are partly metricized. For instance, steel balls for ball bearings are produced in metric sizes; but are commonly expressed in inch equivalents. Again, photographic films for moving pictures are sold by millimeter widths. Many grocery packages are made and sold in this country with their contents printed on the container in both American and metric values. American goods intended for foreign markets are of course generally invoiced in metric units.

The Meter and Gram in American Pharmacy and Medicine

The metric system is the official system in the United States pharmacopoeia, being used exclusively except for the inclusion of apothecary dose equivalents after the metric doses. Biological and dietetic laboratories and literature employ metric units. Many physicians in the United States prescribe medicines in liters and grams. American druggists, putting up prescriptions, have to be able to do so in either system. Many American hospitals use

metric-system measures, either wholly or mainly, in their internal administration.

The Meter and Gram in U. S. Government Use

The United States belongs to the International Bureau of Weights and Measures at Sèvres, near Paris, in association with a number of other countries. At Sèvres, in an establishment surrendered by France to international ownership and use, the international meter and kilogram are maintained and administered. The American yard is based, by Congressional direction, upon the international meter. The U. S. Bureau of Standards at Washington maintains and issues measures in both the American and metric systems, and also the electrical unit standards based on the metric system.

The primary triangulation and leveling work of the U. S. Geodetic and Coast Survey are conducted in metric measures, which are thereafter converted into American measures for customary publication and use.

The U. S. Mint employs the gram for its subsidiary silver and nickel coins. A nickel, or five-cent piece, weighs five grams. Half-dollar, quarter and dime coins are issued at the rate of 25 grams to the dollar, or at $12\frac{1}{2}$, $6\frac{1}{4}$ and $2\frac{1}{2}$ grams respectively. If any U. S. citizen desires to know the weight of a gram, he has only to feel in his pockets for a fresh nickel or silver coin, and he can readily derive it.

The U. S. Army and Navy Departments use metric units in ordering their medical supplies. The U. S. Public Health Service also uses the metric system.

The U. S. Customs Department employs the international "metric carat" of one-fifth gram, decimally divided, for its appraisal of diamonds and precious stones. The metric carat superseded the earlier carats, that differed slightly in different countries and were non-decimally divided.

The Meter in American Athletic Sports

Prior to the year 1900, practically all athletic sports in America were recorded in miles, yards and feet. In recent years, however, and especially since the advent of competition in the international Olympic Games, metric records, or distances expressed in meters, have come into increasing prominence in our lists of events. Reference to athletic statistics, such as those printed annually in the *World Almanac*, will show that, at the present time,

metric and non-metric events are about equally numerous. Moreover, the encroachment of metric records has not been limited to international events. They are also manifest in national athletics. At the present rate of change from non-metric to metric records, it would seem that the old non-metric records are likely to disappear before many more years pass.

Probable General American Adoption of the Meter and Gram

In view of the progress made by the metric system in America during the last fifty years, as above outlined, it appears to be only a question of time when the present process of transition will be complete, and the metric system will be generally adopted here. The change made thus far has been voluntary, in the sense that there has been no compulsory legislation to enforce the use of the system in America, such as a number of other countries have adopted at different dates. With the change left to individual choice, on the principle that what is everyone's business is no one's business, it is remarkable that it should have gone as far as it already has. As to when the change will be completed and the metric system officially adopted, is a question that can only be answered with the aid of prophecy.

It must also be remembered that the English-speaking peoples have been similarly slow in the past to adopt simplification reforms. Thus, books on the history of accounting and of arithmetic show that it took about 150 years for the mercantile public to adopt Arabic numerals, in place of Roman numerals, in their bills and reckonings, after the Arabic numerals had been adopted by the astronomers and mathematicians. The clumsy Roman numerals only gave place to the Arabic numerals now in universal use, after prolonged opposition, and even bitter hostility in some places. Again, our present Gregorian calendar was inaugurated among most of the countries of continental Europe in 1582; but the change from "old-style" to "new-style" calendar reckoning was not adopted in England and North America until 1752, after much opposition. History records the rising of mobs in England against the innovation, when the change was officially made. It appears that the burden of continually carrying two dates on all correspondence, made the change inevitable. So perhaps, the constantly increasing confusion in all classes of English literature, between metric and non-metric quotations, may compel revision which

is bound to be in the direction of simplicity and international uniformity.

Advocates and Opponents of the Meter and Gram

The advocates of a change to the metric system used to be principally scientists and foreigners. Of recent years, however, they are mainly the younger and more progressive persons, who have already come into contact with the meter and gram, either in our colleges or in travel. Between the years 1917 and 1919 some two millions of young American men visited France and many thousands of American tourists visit continental Europe every year.

The opponents of the change are largely found among those American manufacturers who have formed the opinion that the universal adoption of the metric system would necessitate discarding and replacing all or most of their machinery. Impartial enquiry would, however, probably convince them that this is a mistaken opinion. There would be no necessity to discard any machinery, except that very small group of machines now used for making foot-rules, pound weights or other non-metric standards. There would be no necessity for redrawing or replacing mechanical drawings or blueprints, except those few used to indicate selling prices. After the universal adoption of the metric system, the old existing machines would go on making the same goods from the same drawings. The only changes would come in the sales departments, where the same goods would be cataloged in meters and grams instead of in the superseded units. After the passage of months or years, the old drawings and machines would wear out and have to be replaced by new ones. It would then be optional either to make the new drawings in the new or the old system, and to have the new machines in the old or new sizes, as might be found more economical and convenient. In either case, there would be no necessity or compulsion.

Factories Relatively Immune to Metric Change

The proposition that the manufacturers would be under no necessity to change or discard their machinery is assured by two facts of experience. First, in all the other countries that have already adopted the meter and gram, the testimony is that the existing machines were not discarded. It was the price-lists that had to be changed. Second, it is well

known that a vast aggregate amount of American commodities, made in non-metric factories to inch and pound measures, are annually sold abroad in metric countries where they are presented and cataloged in metric units. Moreover, many machines built in metric countries have employed and still sometimes employ Whitworth screw threads, designed to English measure.

In modern factory mass production so much use is made of dies, gauges and templates, that the individual workman may be ignorant of the exact sizes of the parts he works upon, whichever system may have been used in the designs.

Manufacture is Essentially of Private Concern; but Sales International

It is very natural that those manufacturers who are fearful of having their machines made useless by the adoption of the metric system, should oppose the change. There can be nothing but sympathy for the attitude of caution. When they realize, however, that metric legislation does not interfere with manufacture, but only with sales sizes and weights, their opposition is likely to be withdrawn. Factory production is a private matter, in which the manufacturer always has, and always will, used such tools and units of measure as he finds most convenient to work with. The selling price of goods is, on the contrary, a matter of both national and international interest. The market units of length, area, volume and weight should be the simplest possible, and should be everywhere the same. Only the English-speaking people are now outside of the international selling system of the meter, and gram. We have inherited a time-honored but very clumsy system of measures, so complicated that few of us can recite them all without the aid of printed tables. The metric system is so simple that it needs no tables, just as our dollar-dime-cent currency needs none. Steam, gasoline and electricity are making this globe so small, that it now only requires one-seventh of one second for a radio signal to go all around the world. We cannot expect to maintain more than one ultimate system of weights and measures on a seventh-second world. Will the ultimate system be the fifty-unit American system, or the sixty-unit English system, or the meter-liter-gram system? To ask this question is virtually to answer it. Considering all the countries that have already changed to the metric system, one is reminded of the disconsolate jurymen who complained

that eleven more obstructionist jurymen he had never met.

Ambiguities of the Present American System

Among the fifty odd units of our American system, there are at least a dozen that differ materially from units of the same name in the British system; namely, the minim, scruple, dram and ounce of fluid measure, the gill, pint, quart and gallon of liquid measure, the peck and bushel of dry measure, the cwt. and ton of avoirdupois.

Here in Cleveland, on the south shore of beautiful Lake Erie, the liquid quart is one quantity; but on the opposite north shore, among our Canadian friends, it is another. The Canadian quart is more than twenty per cent bigger than the U. S. quart, and the same ratio applies to gallons, pints and gills. Our U. S. quart is for many practical purposes the same as the liter, being only about five per cent less than the liter (0.946 liter); whereas the Imperial quart of Canada is about one-eighth larger than the liter (1.137 liter). We still retain the old wine gallon of Queen Anne, containing 231 cubic inches; whereas the Imperial gallon adopted in 1824, contains 277.274 cubic inches. This serious ambiguity in the quantitative meaning of the word gallon, has given rise to much confusion. Apparently the simplest way out of the tangle would be for each side of Lake Erie to adopt, as a compromise, the world quart or liter, which is not far from midway between the two sizes. The gallon would then be a world gallon of just four liters. Since a liter is a cubic decimeter, or approximately the volume of a cube of four-inch edge, the world quart would have approximately 64 cubic inches (more strictly, 61.624).

International Aspect of the Existing Situation

It is a constant source of surprise to people in other countries, that the English-speaking countries should persist in their old fashioned systems, especially as the English-speaking countries have done so much for the world in production and other progressive ways. The rift brings a hardship to both sides. It forms a partial restraint of trade, and an appreciable barrier to mutual understanding. There is not the least hope of the thirty and more metric countries abandoning the meter and gram in favor of either the English or the American system, any more than there is of our abandoning our U. S. decimal currency in favor

of the non-decimal currency which prevailed in North America in colonial days. It is manifest that the English-speaking countries are already in transition to the metric system, and that sooner or later, that system will be universal over the globe. Meanwhile, whether the change comes soon or late, we of the English-speaking countries have to become familiar with all three systems. Since each of the numerous other countries has already abandoned its own primitive system in favor of the meter-gram system, they have collectively established a strong moral claim of an international character, upon the co-operation of the remaining nations.

Conclusion

Seeing that our science, engineering, business, industry, sports, currency and literature are riddled with increasing metric encroachments, it is futile to take the attitude of King Canute on the sea shore commanding the rising tide to withdraw. It is incumbent upon all of us to aid the transition which is taking place, by assisting the advance of the metric system in every way that will avoid giving offense. While on the one hand, no one should be compelled to use a unit that he objects to, the necessities of life upon this relatively small planet, with the resulting obligations of international science, commerce and mutual understanding, demand that all commodities should be bought and sold, as soon as practicable, upon the basis of the meter and gram.

STUDIES AT THE BALDWIN BIRD RESEARCH LABORATORY

With the end in view of reducing the number of House Sparrows on his estate, S. Prentiss Baldwin, Research Associate in Biology, first set traps in 1914 at Hillcrest Farm, Gates Mills, Ohio. It was only natural that in addition to capturing the obnoxious Sparrows the traps caught many native birds, this latter fact culminating in extensive experiment and intense research in the science of ornithology which has been eagerly pursued for the last sixteen years.

Having heard of numbered identification bands, Mr. Baldwin procured some and placed them on about ninety native birds that first season. Enthusiasm was aroused when it was found that some of these birds returned the following season. Consequently, more traps were set, more birds were banded annually, and a steady increase

noted in the number of previously-banded birds which returned to the farm year after year for nesting. To show what magnitude the work has attained, it is interesting to note the figures for 1930 in which a total of more than 2,000 birds were handled. About half of this number were House Wrens, since much of the experiment has concerned this particular species, 125 adult Wrens being banded and close to 900 nestling Wrens being raised.

Until 1920, bird-banding seemed quite a discouraging business due to the fact that it had not yet assumed a place in the scientific world. However, in that year, the Biological Survey of the Department of Agriculture in Washington recognized the value of such study and adopted the methods used by Mr. Baldwin. As various problems arose and the magnitude of the work was constantly increasing at Hillcrest Farm, it was necessary in 1925 to construct several buildings on the premises and engage S. Charles Kendeigh to assist in the research. With the proper apparatus and assistance for pursuit of the work, the Baldwin Bird Research Laboratory was developed, a laboratory for the study of the life history and physiological reactions of birds in relation to their environment.

At present, the field of work extends over a radius of about a mile from the laboratory, 400 Wren boxes being distributed over the area. During the summer season, these nests are visited once a week and desired data obtained. A study of mating activities and shifting of individual birds about the area during the nesting season constitutes much of the work carried on from May through August. One problem in particular has proved quite puzzling to the investigators. While between 35 to 40 per cent of adult Wrens from previous years return to the farm each season, less than 3% of young nestlings put in an appearance the year after brooding. Out-field work has been carefully organized, and it is hoped that some clue may be found which will divulge the reasons why so few young birds return to the same region and what becomes of them. Mortality in nestling birds is undoubtedly high during the first year out of the nest, and there is dispersal into surrounding new areas for nesting.

For the past five seasons, in an area of about fifteen acres about the laboratory, S. Charles Kendeigh of the Biology Depart-

ment of Western Reserve University has carried on more intensive laboratory and field work, concentrating particularly on a study of the body temperature of birds. This branch of the work is explained in an article in the *Bulletin of the Northeastern Bird-Banding Association*, October, 1928. Mr. Kendeigh makes it his affair to know all the nests on this fifteen-acre tract, whether of Wrens or of other species, to mark the territory of each male House Wren as he comes and establishes his right to possession, to identify and band each bird and the mates and the young, so that for years since that first marriage-relations story, many records of changes of mates have accumulated. It is here that there has been tried out the machine which makes observations for entire days and nights though the human observers may be asleep, the recording potentiometer. The detail need not be repeated, except just to say that a tiny thread-like wire, a thermocouple, lying in the nest across the eggs, is connected by cable across the orchard to the machine in the laboratory. Through that machine passes about four feet per day of paper ruled for time and temperature. A pen marks the slightest change of temperature on the paper. As a change occurs, every move of the bird is recorded. It tells at egg-laying time not only the moment each egg is laid, but also every visit the bird makes to look about the nest and see if everything is all right. It tells of the increasing number and length of visits during succeeding days, and, during incubation, it not only tells each time the female leaves the nest and how long she stays off, but records the fact if she only turns around and sits down again.

The other recording instrument is called the "Wrenograph." (This was later changed to "Itograph.") Like the potentiometer, the Wrenograph has a roll of paper ruled for time, and about four feet of it to each day, but this does not record temperature. Instead of the thread-like wire, the Wrenograph operates with a double perch that makes electric contact so that the pen moves to the right when the outer perch is touched and is drawn to the left when the inner perch is touched. This marks on the paper each trip the bird makes into or out of the box, and equally well it records if a bird touches only one perch and if it lights upon the outer and leaves it without going into the box. With these machines one may

note what is going on at different nests without leaving the office, and often they warn of any unusual happening at any point.

It is no more than natural that people should inquire as to the value of such work, both as to its scientific and practical application. Why should anyone study bird activities and bird temperatures? A reprint from *Cleveland Town Topics*, August 10, 1929, answers this in a manner which is highly satisfactory.

"But someone asks, 'What is the use of such instruments for birds, such investigations?' As well to ask a great artist why he paints. As the master-painter portrays his love of beauty, a scientist may pursue the truth of nature. Galileo had no reason for dropping two balls from the leaning tower, except to secure knowledge for its own sake. Business may know its goal, but science does not always.

"Indeed, Mr. Baldwin was quite surprised when an eastern friend, a great children's doctor, said to him, 'Why, I can make use of your temperature observations of young birds in my work with children!'

"The speaker was Dr. W. R. P. Emerson of Boston, whose nutrition methods for children have been adopted in many cities throughout the country.

"'But why are you interested in my temperature observations?' Mr. Baldwin had asked him.

"'Because you can try experiments with birds at temperatures which we cannot try with children. That is because the temperature of a child can never be allowed to drop below 96 degrees without causing grave danger to the life of the child. On the other hand the temperature of birds is much more flexible, and, accordingly, experiments can be tried which produce low temperatures in birds without seriously endangering them.' Dr. Emerson further expressed interest in experiments with birds which would determine the effects of fear, rage, and fatigue upon temperature, such experiments not being advisable with children since their health might be endangered."

IT'S THE LABEL ON THE PACKAGE THAT COUNTS—NOT THE "AD" IN NEWSPAPERS

Seizure of the product and prosecution of those making the representations are the

penalties confronting those who attempt to exploit the public by offering for sale any thing represented as a "flu" preventive."

W. G. Campbell, chief of the Food and Drug Administration of the U. S. Department of Agriculture, has made very clear the attitude of the administration toward those who try to cash in on the public's fear of influenza.

"Any manufacturer," Dr. Campbell announces, "who attempts to cash in on the public's fear of influenza by selling preparations represented by label or by circular accompanying the package as preventives or treatments for 'flu,' la grippe, pneumonia, and related diseases, renders his product liable to seizure and himself to prosecution under the food and drug act. The Federal Food and Drug Administration intends to take immediate action against any such manufacturer."

Dr. Campbell says there is no medical authority to indicate that aspirin, nasal sprays, throat gargles, cod liver oil, disinfectants, anodyne pills, tablets, or powders, milk of magnesia, and similar preparations, or fruits or other products, have any power to check the course of any one of these maladies.

According to medical authorities, he says, there is no known drug or combination of drugs, nor any food, which will prevent or cure influenza. This statement, he insists, reflects the world-wide experience of the medical profession. Under these circumstances, the labelling of any preparation as a treatment for "flu," grippe, or pneumonia can only be treated as misbranding within the meaning of the food and drugs act, subjecting the products to seizure and the manufacturer to prosecution.

"The food and drugs act," Dr. Campbell explains, "does not reach false advertising statements appearing in the press or in any advertising medium not included with the package of the preparation itself. The food and drug enforcing authorities are therefore powerless to check such misleading claims, serious as the consequences may be in the case of those who are led to depend on such ineffective products and to neglect the hygienic precautions, such as isolation, rest, sleep, diet, and proper ventilation, recommended by public health authorities.

"Today, manufacturers are usually cautious about putting unwarranted claims upon the labels of their products, knowing

that they render themselves liable under the food and drugs act, and those who are inclined to take advertising claims at face value will frequently find that the labels themselves, or the circulars accompanying the packages, do not repeat claims made in outside advertising."

—From *The Drug Trade News*.

PRIVATE GROUP CLINICS

By Willis H. Clinton, '31

The report of the committee on the costs of medical care published in January of this year was wholly on the subject of private group clinics. The committee was organized to study the economic aspects of the prevention and care of sickness, including the adequacy, availability, and compensation of the persons and agencies concerned. The report included the administration of group medical practice as represented by the policies and procedures of 55 private associations of physicians and dentists. The data were assembled during the spring and summer of 1930.

Down through the ages the practice of medicine has been carried on as the responsibility of the individual practitioner, although variations from the established custom have been made by industries, governments, or states to provide medical services for selected groups. "Private group clinic" can best be defined by the words, merger, combination or "pooled." Several individual practitioners, usually specialists in their respective fields, get together and "pool" their capital investment, professional services, and administrative procedures. They cooperate so that each has access to and uses the same equipment, office space, laboratories and maintain many facilities in common. The administration of the clinic is carried on by a business man as far as non-medical matters are concerned.

The clinics have been organized for the most part since the World War. The committee estimates that there are 150 private group clinics in the United States with a total medical personnel of about 2,000. Most of them are located in the middle west with a few in the south and far west, but with practically none in the eastern states.

The average net income of 301 doctors in 27 private group clinics was \$9,747 during

1929. At first thought this figure seems relatively low, but after realizing that it represents practically pure profit to the practitioner since he has no rent to pay, no overhead costs, no worries of upkeep and expenses of like source, it is a good income and is perhaps much higher than that of the physician in private practice.

Some conclusions established as a result of this study of private group clinics were:

1. Group clinics are in direct economic competition for the medical service which constitutes the major portion of the practice of independent practitioners.
2. The members of private group clinics generally make an effort to maintain a personal relationship between physician and patient.
3. The volume of medical service carried on by a private group clinic makes possible the establishment of a specified maximum fee for difficult individual cases and for complete annual service to groups of patients.
4. The employment of business managers has usually resulted in increased administrative economy and efficiency.
5. Private group clinics, through their available equipment and their coordination of medical specialists, are in a position to fulfill the basic requirements of good medical care with economies from which either or both the clinic members and the public may benefit.

In the *Journal of the American Chemical Society*, 53,309, 1931, published January 12, we have found a thesis headed, "The Migration of Acyl from Sulfur to Nitrogen." Notation is made that it is a contribution from the School of Pharmacy and the Morley Chemical Laboratory of Western Reserve University, by H. P. Lankelma and Albert E. Knauf. Mr. Knauf graduated from our Pharmacy School in 1928 with a B. S. degree. While in pharmacy school he was noted for his high scholarship and diligent work and was well liked by his fellow students. We understand that he is working to obtain a Ph. D. degree and we all know that he is capable of doing it. We are mighty glad to see that he is progressing rapidly and accomplishing things, and we sincerely wish him much success in his undertakings.

...An Open Letter...

To the Graduates of the School of Pharmacy:

Alumni Associations were created for a definite purpose. That purpose was to direct students to the school, to provide a means whereby classmates could maintain contact with one another, to act as a force in the advancement and progress of their school, and to keep members up-to-date in their work through contact with the school.

We have an Alumni Association, the sole purpose of which has been to give a banquet in honor of the graduating students. Your officers have set themselves the task of making the Association a live organization, capable of satisfying the purpose of a good Alumni Association. In order to do this, the following must be accomplished: An organization must be created that will function twelve months out of the year; every graduate of the school should be an interested, active member; a sound financial plan must be established.

Your officers have indicated their willingness to give unselfishly of their time and effort in the interests of your organization. Five meetings of the Executive Committee have been held this year with every member present. Our attention at these meetings has been directed primarily to membership and finances, which run hand in hand. In studying the situation, we found that we are annually "broke," a condition which appeared to be due to two factors. The first is that our life membership fee of five dollars is ridiculously small in comparison with that of other associations. The second is that our graduating classes do not join the Association one hundred per cent. No change in the life membership fee is being advocated. The Executive Committee feels that with larger membership and close management a sufficient surplus can be built up to take care of the planned activities.

As for the larger membership, we have taken steps to secure memberships from students graduated during the past ten years. Plans have also been laid to secure one hundred per cent membership of the classes to be graduated in the future. Some of you received a letter several months ago

calling your attention to the fact that you were not enrolled as a life member. If you have not answered it yet, do so now, and enclose your check.

The increasing interest manifested in our activities is an excellent sign that there will be a big turn-out for the annual dinner dance. The dance itself will be bigger and better than ever before, a grand get-together where everyone will have a wonderful time. Make sure now that you will be able to attend.

In closing, I ask you again, in the name of the Association, to send in your check for life membership, and assist us in our sincere efforts to give you a better Association. Without your cooperation we can do nothing.

Very truly yours,
W. F. Wargell, '28.

MISS LUCILLE G. BICKFORD, '30

At the request of the PHARMACON, Miss Lucille G. Bickford, B.S., 1930, recently consented to let her friends in on the work she is carrying on as pharmacist of the White Cross Hospital, Columbus. She is the only pharmacist in the institution which has a total of 275 beds, and, as a small portion of her responsibilities, it is Miss Bickford's duty to prepare all prescriptions for patients who may occupy them. In addition, "Bicky" has eleven drug baskets which demand attention every day except Sunday. And, during the remaining part of her working day, which extends from 8 a. m. to 2 p. m. and from 4 p. m. to 7 p. m., one may find Miss Bickford arranging orders for the purchase of drugs, liquors, narcotics, and alcohol, making up stock solutions, or dispensing drugs and solutions for hospital use.

Not so long ago, the *Columbus Dispatch* carried an article concerning Lucille and explaining the details of her position. With much interest we note the comment of Dr. John G. Benson, superintendent of White Cross Hospital, in connection with Miss Bickford's work: "One of the most important positions in the hospital. Too much emphasis cannot be placed on this position. It demands a competent, well-trained pharmacist who knows the last word in pharmaceutical practices and who possesses skill and reliability." And we are definitely confident that Miss Bickford ably fulfills these demands to the last degree.

The Reserve Pharmacon

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School of Pharmacy of Western Reserve University*

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EDITORIALS

Various of the more recent proprietary medicaments on the market constantly receive abuse in many drug stores when called for on prescription.

The matter of substitution is not a new evil, however, pertaining not only to these particular products but also to many other of the multitude of medicines which may be called for by the physician. On the surface, substitution of one brand of medicine when another is specified by the physician does not appear to be such a major transgression. But if one ponders on the matter for a short while and gives it careful consideration, his final analysis must convince him that this type of substitution is just as bad and on an equal plane with that in which the ingredients of a prescription are juggled without so much as a consultation with the prescriber. Ethical pharmacists forbear acquiring either habit, but there are some within the ranks of Pharmacy who know little concerning the principles of their profession and even less about upholding them.

Two Pharmacopoeial products frequently find their way into prescriptions when definite trade-marked medication is ordered. We do not hesitate to name them: Cinchophen and Phenobarbital. And whenever Atophan or Luminal is prescribed, there are certain pharmacists who will dispense invariably the U.S.P. product, manufactured and distributed by other companies at a

lower price, of course, than that offered by the makers of these articles. They will argue that the two products are chemically identical with those in the Pharmacopoeia. And right they are! But do they stop to consider the fact that neither are they keeping faith with the physician nor giving the manufacturer of the trade-marked brand a square deal?

In many instances, the latter's goods are imitated in appearance, and it is impossible to tell them from the genuine to the extent that the dispensing of such on prescriptions may never be detected. But supposing, due to no fault of the medicine, but rather to some unforeseen complication in the condition of the patient, the desired and usual results are not obtained following administration. Doubtless, the prescriber is puzzled in not deriving the accustomed beneficial effects, and he is liable to look to the medicine as the offending agent. Turning to the channel through which it was dispensed, the physician has a right to investigate the questionable medicine, and, should he discover that the pharmacist has resorted to such petty substitution, a very embarrassing situation arises. This, however, is not the major consequence of such a situation which takes form in the destruction of the physician's confidence in the pharmacist. And there are none of us who cannot realize the significance of this. So, out of some extraordinary therapeutic effect which cannot be

attributed rightfully to medication, the pharmacist may dig his own grave should he resort to practice of the sort described.

It is thought that such substitution arises out of the fact that the manufacturers of these trade-marked brands demand such high prices for their products. Which prices may or may not have their justification. Why such prices, sometimes doubling and tripling those of the Pharmacopoeial products, exist, remains a sort of mystery. If others can duplicate the products as to chemical constitution and therapeutic activity, and do so at much less expense, there seems to exist no particular reason why the manufacturers of the trade-marked brands should not be able to approach these prices. If they would, there would be just that much less temptation toward substitution for their products. True, the manufacturers go to added expense in putting their articles over to the medical profession by sending their detail men around to the doctors, explaining fully the actions, merits, etc., of their brands. And when such are called for by the physician, it is only fair that the order be filled exactly as designated.

What can the pharmacist do to cope with this situation? There are two solutions occurring to us, both of which may be carried out by the pharmacist. First, he may go to the physicians in his vicinity and do a little detail work of his own, explaining to them the Pharmacopoeia and showing them explicitly where duplicates of its products appear on the market under trade-marked names. At the same time, he should stress that the products in this book are representative of the highest attainable standard and purity, and are rightfully deserving of constant usage in their practices. Pick out other points worthy of mention to the physician. Present them along with the advantages to be gained personally by the pharmacist, and it is believed that the physician will give his whole-hearted cooperation. Should he fail to see the druggist's arguments, there remains only one thing to do. If the doctor insists on the prescribing of the trade-marked articles, fill his prescriptions to a "T," and make charges which will compensate the pharmacist fairly for stocking such products. But avoid substitution, even in its most mild form!

A magazine representing the manufacturing drug trade recently expressed itself, editorially, in the following language:

WHAT PRICE PACE? "The general line of U.S.P. pharmaceuticals sold to the druggist has just about seen its day as a profit producer. Perhaps those who have the courage to continue to supply these items, while the more progressive are striking them from their lists, might be able to show an adequate return. But the competition is now being forced into household products. Laxatives, antiseptics, vitamin products, and other lines are being further developed by those manufacturers who have relegated a great number of their pharmaceutical items to the scrap heap. A manufacturer can not allow himself to be forced from the drug trade due to the failure of pharmaceuticals to produce an adequate return. Greater rewards await those who can produce properly protected specialties for which there will be no competition. The brains of the drug trade are being concentrated upon any existing products that can be improved upon or replaced. The pace quickens."

Indeed, the pace is quickening every day. Every retail pharmacist knows it; every physician knows it; the thinking public is beginning to know it. And what is the result? During the last five years about three score "new" analgesic, antineuralgic, and hypnotic combinations were introduced. On an average, then, we have one of these "new" preparations appearing every month, and, according to one of the leading pharmacologists in this country, most of them have practically the same action. The numerous and "marvelous" antiseptics recently introduced for oral hygiene and those for feminine hygiene are far-fetched combinations offering nothing "new," except, of course, new ideas for "quickening the pace." If "new" laxative preparations are not keeping up with the "pace," it is because, probably, vitamin and food accessory combinations, claiming similar therapeutic usefulness, have stepped in the breach as replacements.

Any person familiar with the situation knows that the vast number of needless duplications put on the market as "specialties" and priced so as to yield an excessive profit has been the "pay-dirt" profit of many pharmaceutical manufacturers. Standard drugs and official preparations were carried,

in many instances, to lend respectability to the business. Now, it seems, the "pace" has become so hot, the intensive exploitation of trade-marked and proprietary rights has gone so far, that the lower profit-yielding standard preparations are to be cast aside. Intensive advertising will take the place of extensive reputability.

We do not believe that professional pharmacy should countenance this extreme commercial viewpoint that business must keep up the "pace," when the public health is concerned. To allow any narrow-minded, insidious commercial practice to undermine the best health interests of a nation is to lower it morally and spiritually. If the public is led to attach false values to medicinal preparations, or if it is led to suspect insincerity on the part of those who produce them, its faith is destroyed and it turns to drugless methods and the cults.

In connection with the above it is interesting to note the following comment by

PROFESSIONAL PRACTICES Dr. A. B. Denison, of our University Health Service, in the opening article in this issue:

"A profession is a group whose activities tend toward a goal that will ultimately eliminate the reason for its existence." We are firmly convinced that this idea of commercializing pharmacy to the extent that causes a vast and superfluous mass of products to be thrown on the market, supported by extravagant and ingeniously worded high-powered advertising propaganda, is not only mischievous but also demoralizing to both professional medicine and pharmacy. Certainly, the medical profession cannot lay all the blame at the door of the pharmacists, so far as non-professional practices are concerned.

A few months ago, Dr. C. W. Edmunds, pharmacologist at the University of Michigan, in an article written for the Journal of the American Medical Association, quoted certain state medical examiners as saying, "There is an apparent deficiency in the training of modern medical graduates in the subjects of pharmacology, materia medica, etc.", and "the men are prone to use any drug or preparation that a pharmaceutical house puts out," and again, "it is quite lamentable that so large a number rely on the proprietary preparations of the various houses." The author comments as follows:

Imagine a physician receiving a letter from a pharmaceutical firm telling him that "he should refer his medical problems to them." How reliable and how unbiased will be the therapeutic advice which he will receive? Such a letter is an insult to the profession, and physicians are so used to them that they fail to arouse even a mild state of irritation. Further reference is made to the flood of advertising matter that naturally has a certain influence upon the physician.

In view of all this, it seems quite proper that pharmacy, working through its professional societies, should continue to call attention at all times to the wealth of official and semi-official products which the physician always has at his disposal, if he will deign to use them. Just a little more attention, during the preclinic years of the physician's training, to prescription writing in connection with his pharmacological studies would help some. A more comprehensive course in materia medica, with a few fundamentals of pharmacy thrown in, would help more.

The whole matter is one of no little significance to both medicine and pharmacy and the professional practices for which they stand. If disintegrating forces in the form of sharp commercial practices continue to encroach, there is probably but one eventuality. Both professions will find themselves under State control as already prevails to a greater or less extent in most of the world's progressive countries. Great Britain and France are probably the only ones that approach this country in the looseness of public health programs, so far as professional practices are concerned.

Although the metric system has been the official system of weights and measures in

THE METRIC SYSTEM IN PHARMACY AND MEDICINE the U. S. Pharmacopoeia since 1880, and its use has become widely extended in all fields of pharmaceutical endeavor,

its use has, nevertheless, been slow of adoption by medical practitioners. Probably about ten per cent of the physicians in the United States use it and most of these have come into practice since pharmacology became firmly established as a member of the preclinical group of medical sciences. And it must be remembered that barely half

of the medical colleges in the country today support well-organized departments of pharmacology of equal rank with other departments. Only during the last two decades have the graduates of even the better medical schools had training at the hands of those who were more than empiricists in *materia medica*. The medical student learned his prescription writing from the clinicians or hospital internes, who in turn learned it from their predecessors as an empiric art.

In the modern order of things, we may expect an ever widening use of the metric system. The younger physicians who are given definite instruction and training by up-to-date pharmacologists do use it, and we may expect their numbers to consistently increase. As hospitalization and institutionalized medical practice come more and more into vogue, efficient administration demands standardized and uniform methods in medications, treatments, apparatus, and instruments. Laboratory and metabolic work can be carried on and interpreted most expeditiously in terms of a uniform system. No one but a half-wit can conceive of the old cumbersome and archaic pre-metric systems of weights and measures holding their own under such conditions.

Until such time comes in the future when physicians no longer write prescriptions in the apothecaries system, it will be necessary for pharmacists to use both systems, and therefore we must learn equivalents. As a matter of professional pride, every pharmacist should be proficient in transposing quickly from one system to the other, as occasion may require. At the same time, we believe it the duty of every pharmacist and physician, as a public-spirited citizen, interested in clarifying the hodge-podge weights and measures situation, to lend his best efforts toward the early adoption of the metric system for *all* purposes in *every* kind of activity.

Ten members of the faculty and ten members of the student body recently petitioned the grand officers of Rho Chi
RHO CHI Honorary Pharmaceutical Society for the granting of a charter and the establishment of a branch of the organization at Western Reserve University School of Pharmacy. Favorable

reports resulted from the petition, and the official installation of the local chapter will follow shortly.

This step should prove a mile stone in the search which leads to the acquirement of better scholarship. Scholarship has been ever predominant in the School of Pharmacy, but there is always room for improvement, no matter where one may turn. With the prospect of election to a national honorary society, composed of eighteen chapters, a reward well worth striving for, let us hope that this added incentive will spur and urge every student on to greater accomplishments in the field of scholastic attainment and arouse within him that spirit which leads one on in striving to gain such honors.

We have recently found a new book on our shelves bearing the title, "Mathematics in Modern Life." It is
MATHEMATICS the year book of the
IN PHARMACY National Council of
Teachers of Mathe-

matics. This council is an organization of mathematics teachers the purpose of which is to create and maintain interest in mathematics and keep its values before the educational world, to help improve the teacher in service, and to raise the general level of instruction in mathematics. A year book is published to set forth material which is thought to be helpful to members of the organization and outsiders as well, upholding the purpose of the organization. The 1931 year book is the sixth of a series published since 1926. It was especially planned so as to be not only of great value to the teacher of mathematics but also helpful to the intelligent layman. The editor says, "The purpose of this book is to set forth as completely as possible in the space allotted the place of mathematics in modern life." It has done this through the writings of men of various professions who are recognized as well understanding the conditions of their respective profession. Each chapter discusses the importance of mathematics in some specified field of work, eg. Social Science, Biology, Religion, Investments, Agriculture, Physics, etc.

We find one chapter headed, "Mathematics in Pharmacy and in Allied Professions," written by Dean Edward Spease of

our School of Pharmacy. In this article he discusses the mathematics useful and necessary in the study and practice of Pharmacy, Medicine, Dentistry, and Nursing. He first sets forth the mathematics curricula in the professional schools and the prerequisites for entrance to these schools. In doing this it is emphasized that the aim in these schools is not to teach mathematics but to teach the application of mathematics to the profession. The general mathematical curricula of pharmacy and allied professional schools comprise the following: First, learning the tables of weights and measures and methods of conversion from one system to another. Here the author emphasizes the need for teaching to derive answers in weighable and measureable terms; Secondly, the use of ratio and proportion are taught, the value of these, aside from being indispensable in chemical and pharmaceutical calculations, lying in obtaining mental pictures of the relative sizes of objects. This brings to mind the suggestion of the value of a laboratory in connection with mathematics courses. Percentage calculations also become very useful in making solutions and some other preparations. The author under this head suggests that percentage should be applied to other things than only financial ones when being taught in the preparatory schools. In closing he gives his opinion as to the preparation of students for professional work. He states that he believes the old-fashioned arithmetic should be carried into the high school and taught along with algebra and geometry, etc. He is an advocate of teaching all the mathematics that can be worked into the high school curriculum and supports himself by stating that through experience it has been found that the student who is good in mathematics generally makes a good all-around student.

We who as students have taken pharmacy mathematics under Dean Spease know that his methods of teaching are somewhat different from the ordinary, but we know, too, that they usually accomplish their end. We believe he is certainly well-qualified to discuss the place of mathematics in pharmacy and feel that he rightly deserves the honor of being chosen to set this forth in such a way. He has mentioned some points that are worth careful consideration. We wish at this time to con-

gratulate Dean Spease on his article and its appearance in the year book of the National Council of Teachers of Mathematics.

DEAN SPEASE HONORED

At the Grand Council of Phi Delta Chi fraternity held in Columbus last February, Dean Edward Spease was presented with a beautiful watch in appreciation of four years of continuous and distinguished service in behalf of that fraternity. Dean Spease was elected president of Phi Delta Chi in 1927.

RHO CHI HONORARY PHARMACEUTICAL SOCIETY

During the past few months, negotiations have been progressing for the establishment of a chapter of Rho Chi Honorary Pharmaceutical Society in the School of Pharmacy, Western Reserve University. According to scholastic records and scientific achievement, twenty persons, including ten of the faculty and ten students, were found eligible for membership in the organization, and, at the initial meeting of this group, presided over by Dr. F. J. Bacon, already a member of Rho Chi, preliminary plans were discussed and arrangements made to meet the obligations which are necessary for any group seeking a charter.

A petition, bearing the signatures of all petitioners in the Pharmacy School, has been circulated among the existing chapters throughout the United States for their consent to granting the charter, and recently it was learned that all had signified their willingness to the establishment of a chapter at Western Reserve. Most of the group have ordered keys, the official badge of Rho Chi, and these will be presented Friday, April 24th, at which time the chapter will be installed by Dr. Bacon. A banquet will precede the installation as part of the evening's entertainment. The initiates include: Edward Spease, Edward S. Davy, Neil T. Chamberlin, Leroy D. Edwards, Robert P. G. Stockhaus, Earl E. Hester, Robert M. Porter, Paul R. Hudson, James S. Neely, Cecelia Kranaskas, Wanda J. Baygrowitz, E. Alexander Celke, R. Oliver Farris, Robert A. Fitch, Ruth L. Kotershall, Harry F. Valway, George H. Gerlach, Donald Leigh Kaufhold, Gustav C. Kostell, and Russell B. McArtor.

The following, taken from a news letter of Delta Chapter as compiled by Zada M. Cooper, National Secretary, gives a very good history of Rho Chi:

"Rho Chi was organized May 4, 1908, by eleven seniors at the University of Michigan. It was called the Aristolochite Society. In December 1912 it was recognized on that campus as an honor society. A second chapter was organized in 1919 at Corvallis, Oregon, and in 1922 another at the University of Oklahoma.

"In 1918, the Committee on Activities of Students and Alumni of the American Association of Colleges of Pharmacy, under the chairmanship of Dean Lyman of the University of Nebraska, recommended that the Committee be authorized to organize an honorary pharmaceutical society, with the baccalureate degree as a minimal requirement. The idea was new and there was some opposition. The report included a number of other recommendations, and partly because of that fact and partly because none except four-year graduates would be eligible, the recommendations were not adopted. The report was accepted, however, the Committee continued its work and was authorized to give the question further study.

"In 1919, the Student Army Training Corps was found on nearly every campus and student organizations were at a standstill. But by 1921 normal conditions again existed. The Committee was then under the chairmanship of Miss Cooper and the recommendation was made again, this time without the requirement of a B. S. degree. And this time it was adopted.

"The Committee knew of the existence of the Aristolochite Society, and believing that one honorary society was enough and also that the Society already organized might serve as a nucleus, the chairman conferred with its officials. During this year, 1922, steps had been taken to make it a national organization, the name had been changed to Rho Chi, and it had been incorporated under that name. So, with a few concessions on either side, the Committee that year recommended that the Conference 'express its approval of this Society as the honorary pharmaceutical society of America, and support its extension into other Conference (formerly the name of the American

Association of Colleges of Pharmacy) schools'. The recommendation was adopted, and the Society has grown rather rapidly since."

FOR YOUR GENERAL INFORMATION

DRUG ADDICTS IN THE UNITED STATES

The actual number of drug addicts in the United States is an unknown quantity, because the use of narcotics is usually carried on in secret. Various estimates have been made and much of the popular writings of the day undoubtedly tend to exaggerate the evil effects of the so-called "demon flower." Any estimate greater than 200,000 is a very liberal one, and it is believed to be beyond reasonable probability. The Public Health Service has estimated that there are 110,000 addicts in the United States, or approximately 1 in each 1,100 persons. One of the greatest precipitating causes of drug addiction is ease of access to the drug and contact with other addicts. In a recent study conducted by the Public Health Service, it was found that among 3,587 drug addicts, 1,694, or a little less than half, attributed their addiction to the influence and contacts of other addicts in the community. Curiosity, thrill, and bravado accounted for 340 more, whereas, self-treatment for the relief of pain accounted for 531 as the cause of addiction. The predisposing or underlying causative factors, however, rest upon the constitution or mental make-up of the individual. These factors are being recognized and appreciated more and more in the treatment and management of drug addiction.—(Public Health Reports.)

USES OF SOAP

Few people realize that aside from the use of soap for cleaning purposes, immense quantities of it are employed every year in industry. According to a recent survey of the Procter and Gamble Company, Cincinnati, some of these uses are reported as fol-

lows: Soap is an ingredient in twine, some kinds of paper, in linoleum, and in making metal polishes. In making playing cards, neutral soaps are used to put a gloss on card stock, and in cordage mills it is used to improve the gloss and finish of cord and twine. Linoleum manufacturers and manufacturers of artificial leather use it for softening jute and as an ingredient in the finish of such goods. In the manufacture of rubber it is used for coating molds with a soap solution to keep the casings from adhering to the rubber, and it is used as a base for shoe polishes and stove polishes. It is used in pharmacy for preparing many medicines such as liniments, pills, emulsions, and the like. Other uses named include its employment in the preparation of insecticides, "pickling" and cleaning machinery, as a base for emulsions, lubricants and dressings, and for burnishing and cleansing jewelry. Besides its use as a basis for tooth pastes, creams, and shampoos, enormous quantities of soap are employed by cleaners and dyers, hotels, laundries, and various public and semi-public institutions.

in round numbers the average *annual* payments from 1929 to 1965.

	Payments by Germany to Allied Countries	Payments to the United States by Allied Countries
France	\$249,300,000	\$108,400,000
Great Britain	97,400,000	177,300,000
Italy	50,900,000	26,500,000
Belgium	27,500,000	11,700,000
Jugo-Slavia	20,000,000	1,100,000
Germany	15,700,000
Roumania	4,800,000	1,900,000
Portugal	3,100,000
Japan	3,100,000
Greece	1,700,000	300,000
Poland	120,000	6,900,000
Total	\$473,700,000	\$349,800,000

Figures from *Business Conditions Weekly*.

FRATERNITIES

ALPHA ZETA OMEGA FRATERNITY

All clad in night shirts and night caps, the shy, weary, and much-worried pledges boarded the street-car at East 105th and Euclid Avenue and rode to Playhouse Square, much to the enjoyment of their fellow-passengers. Pedestrians gathered at their heels as they paraded up and down the Avenue, offering side shows of humiliating caliber here and there. This is what happened at the preliminary to the strenuous initiation the new members received Tuesday, March 17th.

Nine new members were admitted this year, and, although this number may seem large, it consists of students of the freshman, sophomore, and junior classes. However, nine is as great as the number of new members admitted in the past three years. Those who were initiated are Philip Donner, Julius Duber, Seymour Cohen, Aaron Cohen, Oscar Padwa, Julius Miller, Leonard Hagen, William Kutler, and Sam Lester. The initiation committee, consisting of Abe Harris, Joe Dworkin, Norman Weintraub, and Sam Cohen, successfully performed its task and should be congratulated for ideas which were not used previously.

United States drug control officials have authorized the announcement that ether manufactured for other than medicinal purposes and plainly marked "Not for Anesthetic or Other Medicinal Use" will not be subject to seizure because it contains peroxide, aldehydes, acids, etc. Ether which is not labelled in the manner indicated will be subject to seizure, notwithstanding the fact that it is not marked "U.S.P.," the bureau taking the position that inasmuch as ether is a U.S.P. product it must at all times conform to the Pharmacopoeial standard unless so labelled to exclude it from the category of medicinal agents.

ECHOES FROM THE WORLD WAR!

Those who started the dance in 1914 are now paying the fiddler. It was gas-tears then, but it is crocodile-tears today.

Most of the money that the United States debtors will pay through the next generation will come directly from German reparations payments to them. This relationship is seen in the following table, which gives

As convention time draws near, we find that Theta Chapter of Cleveland will be well-represented at Cincinnati. The convention to be held on June 30, July 1 and 2 will be attended by at least fifteen or twenty members from Cleveland. We intend to enjoy ourselves immensely in Cincinnati, as the boys there are anxious to repay the Cleveland fraters for the wonderful time shown them at the 1930 convention.

The annual formal dinner-dance to be held soon is in charge of a committee which promises originality in entertainment and a grand time for all who attend. The committee consists of Abe Harris, Hy Gerson, Al Fine, and Frank Lattin.

About the Fraters

An increase in the Franklin family deserves the heartiest congratulations of all the friends and Fraters of Jack Franklin. It's a boy, folks, and Frater Franklin is going to throw a smoker in his honor soon.

Seen Morris Spiegle lately? Funny what the Y. M. C. A. will do to a man, but he has no more "beer belly." He's just a big, strong he-man, that's all.

Roy Scott—still as brutish as ever—fell on Frater Fine's shoulder during a tussle at the "Y" and tore loose a muscle, putting Al on the shelf for a week.

Speaking of the Y. M. C. A.—each Tuesday and Thursday finds Fraters Harris, Scott, Riemer, Spiegle, Kovacs, Silby, Baskind, Weinberg, and others present. Occasionally Frater Eisenberg manages to attend and join the others in handball, basketball, boxing, wrestling, swimming, and other events.

Brothers in Cincinnati are planning an exhibition boxing bout to be staged by Frater Eisenberg at the convention. Eisenberg made a wonderful showing in the intramural tournament by winning the 135 lb. championship, and he is willing to box in Cincy if he is in trim.

Frater Dworkin is now assistant manager at Weinberger's Euclid and East 2nd store.

Fraters Baskind (Al and Harry) now have two stores—one on East 123rd and the other at East 116th and Buckeye Rd.

The usual "Sun Tanners" are again busily engaged making arrangements to rent a cottage on the lake to obtain their annual

enjoyment and coat of tan. Meetings of the chapter will be held at the Azoan cottage throughout the summer months.

KAPPA PSI NEWS

The records of Beta Beta Chapter found themselves swelled by two, Friday, February 27, when the names of Jack Meresicky of Cleveland and Ray Stemple of Waynesburg were added to the roll book. Both boys withstood well the voyage which carried them over seas that turned out to be plenty choppy, but we vouch that they were mighty glad when the old ship, "Initiation," tied up in the home port. This gives Kappa Psi a total of fourteen active men on the campus, and the two recently-initiated brothers are of the type of which we are rightfully proud.

On the heels of initiation, officers were elected and installed for 1930-1931. With pleasure we announce the names of the following men in whose hands the reins of the chapter lie for this year: Regent, Karl W. Schweickardt; Vice Regent, Winton A. Webb; Treasurer, Ray R. Stemple; Secretary, John A. Obester; Steward and House Manager, Jack C. Meresicky; Chaplain, Stephen W. Sabo. These boys all have big tasks to perform, but the remaining members of the chapter feel secure in the selection, and stand back of their choices, ready to aid wherever and whenever possible.

Friday and Saturday, April 10 and 11, the Ohio Chapters of Kappa Psi held their annual convention at the Gamma Delta House, Ohio Northern University, Ada, Ohio. This marked the second of such meetings, the initial one being held last year at Columbus. Something like fifty brothers attended the convention, Beta Beta Chapter being present to the extent of fifteen men. Official sessions opened Friday night, then continued through Saturday morning and afternoon, during which time various fraternal problems were discussed and presented from different aspects. As a result of the convention, the Cleveland boys acquired some very good ideas on how to cope with different fraternal situations as they present themselves for consideration, and they hope that their other Ohio brothers derived as much benefit from the meeting as they did. The convention was a huge success, and Beta

Beta Chapter congratulates Gamma Delta on the way it managed all the affairs, taking this opportunity to thank the boys at Northern for the splendid time which they arranged.

Brother Alex Celke heads a committee which is at present concluding plans for the annual formal dinner-dance to be held Saturday, May 9, 1931. The Hollenden Showboat will be the place; there'll be lots of good music and eats; and, if necessary, the committee will furnish the fair lady providing any brother is unable to make the proper arrangements. This is a pretty big undertaking for any ordinary committee, but not for one with Celke as chairman. The actives have canvassed the city and neighboring vicinities during the past few weeks, and, from present indications, the spring formal is going to be a "hum-dinger," for many of the alumni have signified their willingness to attend. So let's go, fellows! Wipe the grease off the patent leathers and hope that the ninth favors us with a cool evening!

Under the able direction of Brother Donald Kaufhold, a benefit bridge party was given at the Chapter House, Friday evening, April 17, 1931. Several of the alumni, and many friends, in addition to the actives and pledges, contributed to the success of the party.

Saw Brother Charlie Young at school during the spring vacation, and he informed us that he is working at the G. E. Kurtz Pharmacy, 14715 Detroit Avenue, Lakewood, Ohio.

Brother Geuss of Warren, Ohio, was a recent visitor in the city. He spent a few hours at the home of Brother Hickernell, and also managed to say "Hello" to the fellows at the House before he had to hop back to Warren.

Brother Otto Wolfert is employed by the Standard Drug Company at present. Otto was stationed in the Willoughby branch until a few weeks ago when he was transferred to the East 185th and Landseer Road store, and promoted to the position of assistant manager. According to Otto, he has learned plenty about the drug business since becoming connected with the organization.

We find Brothers Stemple and Aldrich at the same place of business, now, Ray recently taking a job at Marshall's Prospect

and Ninth Store, where Mel has been assistant manager for some time.

Brothers Hickernell and Brooke Phillips of City Hospital were present recently at the regular meeting of the Chapter. As usual, Brooke ran true to form, talking so much that no one else could get a word in edge-wise. As for Hickernell—need we add anything?

Brother Bob Porter is still up to his old tricks—seeking and providing ways in which to beautify the fraternity house. Bob contributed a library table, several lamps, and a smoking stand to the cause, and the boys thank him openly for his "big heartedness." Same old Porter. Not satisfied unless doing something for somebody.

Had a letter from Pledge Barney Perifano of Greenville, Pa. a few weeks ago, and Barney informs us that his duties keep him so busy that he doesn't have time for his meals. But, he was pretty heavy at the close of last semester, so he can lose a couple of pounds without endangering his health seriously. As manager of the Alexander Drug Co., Barney is making a great success, and the boys look forward to the time when he will return to continue his studies.

PHI DELTA CHI

The thirty-first annual convention of the Phi Delta Chi Fraternity was held at the Deshler-Wallick Hotel in Columbus, Ohio, on February 23, 24, and 25. We deeply regret that Bro. Edward Spease, who has served as our Grand President for the past five years, has stepped out of office. In appreciation of his undying efforts for the betterment of the fraternity, the retiring leader was presented with a gold watch, the back of which carried an engraving of the official crest, the inside cover carrying an engraving of the presentation. The watch was presented following a banquet which closed the council. It was definitely decided that the 1932 Grand Council will be held at Omicron Chapter at the University of Southern California, Los Angeles. Bro. Robert Kumpf represented the local chapter and was very active throughout the proceedings of the council.

We wish to announce a favorable vote which will lead to the annexation of a new chapter. A local fraternity of Union College at Albany, New York, which has been

petitioning for a charter for the past four years, was favorably received, and will be installed as soon as the school is approved by our executive council.

Alpha Alpha Chapter has moved to new quarters recently. We are now located at 11511 Mayfield Road. Our new home is considerably larger than the old place and has two large finished rooms on the third floor. The house has been newly papered throughout and a new furnace has been installed. We have also acquired several new pieces of furniture recently.

During the cold and dreary nights of February 18, 19, and 20, the well-known Father Aldehyde took the hands of Arville Hagey, Charles Bennet, and Kenneth Gerber and led them over the hot and burning sands into the deeper mysteries of Phi Delta Chi. We are very proud of these new men and their efforts shall be undying in furthering the principles of this fraternity. Following the formal initiation on Friday evening, a banquet was held at the chapter house at midnight. Among the alumni present were Brothers Edward Davy, Bill Hosler, Walter Wargell, A. Patronsky, Paul Howk, R. Stimson, Norman Sanger, Norman Anderson, R. B. Gilbert, Henry Gallagher, Donald Kessler, Hans Rose, Tom Highland, Earl Cook, Al Kuttler, H. Breck, M. Gayok, Dick Koch, Ed. Cantlon, Paul Steidl, G. L. Bruehker, Bob Millager, Don English, and Wilbur Ischie. This was a fine turn-out, but we hope that many more will be with us at the next annual initiation banquet.

Either by misfortune or misplay, our basketball team lost to the Independent team in the final round of the recent tournament. Both teams showed some fine skill. We are yet in doubt as to who will win the bowling tournament, but we certainly have as good a chance as anyone.

We have recently had visits from some of the boys from Xi Chapter of Columbus. We played host to Bros. H. Hart, George Stafford, N. Sulzer, and several others, and we intend to repay the visit during the week of the State Board exams.

We wish to recognize the sincere efforts of George Gerlach in connection with the *Nihon*. George certainly deserves much credit for the work he has done in his effort to

make the School of Pharmacy prominent among the professional branches listed in the University annual book.

KAPPA EPSILON NEWS

The active members of Eta Chapter are planning a benefit bridge party, Tuesday evening, April twenty-first at Haydn Hall. We are looking forward to the loyal support of our friends at school and the members of the Alumnae Chapter.

Eta Alumnae Chapter of Kappa Epsilon has been holding its meetings each month at the homes of its members. The last meeting was held at the home of Julia Smith. At this time, plans for a formal dinner or supper dance in conjunction with the active chapter were discussed. The date has been set for the fifteenth of May, but the place has not been selected as yet. The committee in charge of the arrangements includes Mrs. Orlando Carner, chairman; Gertrude Horsch, vice chairman; and Emma Pejsa, with Ruth Kotershall representing the active chapter.

Members of the chapter have been receiving cards from Antoinette Lutheran, who is spending a few months in Florida with her mother and niece.

We have missed Ruth Johns at our meetings recently. Ruth is taking pre-medical courses at Reserve and plans to enter medical school in the fall. Good luck, Ruth.

Gertrude Horsch has now been fully initiated into the duties of a pharmacist at Lakeside Hospital.

Julia Smith is working at the Moreland Circle Marshall Drug Store.

Emma Pejsa has been learning the "why" and "where-for" of pharmacy as an understudy of Van Zbornik at Zbornik's Pharmacy, 3835 East 131st Street.

You may have heard this'n, but we hadn't, and we liked it.

An elderly lady in New England who was about to die sent for Grace, her niece, and said: "Grace, I am going to die, and I don't want any one to be fooling about it. When you come to lay me out, I want to be laid out in my black silk dress; but take out the back panel and make yourself a dress from it."

Grace said: "Oh, Aunt, I don't want to do that. When you and Uncle Charlie walk up the golden stairs, I don't want people to see you without any back in your dress."

"They won't look at me," the old lady replied. "I buried your Uncle Charlie without his pants."

—Wall Street Journal.

SPORTS

As in other schools, also does the Pharmacy School have its slack season in athletics. In the spring we find little interest in sports, due to the finish of the most popular college sports, football and basketball.

However, in summarizing the participation of the School of Pharmacy in athletics, we may say that we have had a good representation in the past year. In the last football season our delegate, Jerome Ratner, made a splendid showing, having played in all of the varsity contests.

The Pharmacy basketball team functioned fairly well, having finished the schedule with a good percentage. However, we cannot boast this year as we have in the past two of having a championship team. Good spirit was shown throughout the season and the team appeared at any notice of a game.

The Alpha Zeta Omega Fraternity entered a basketball team in the intramural league, winning and losing some tough battles. They ended the season with a percentage of .666. The team, under the management of Sam Lester, consisted of Bernard Spitz, Max Lessowitz, Aaron Cohen, Philip Donner, Oscar Padwa, and Joe Eisenberg.

Joe Eisenberg retained his title as lightweight boxing champion of Western Reserve by winning the intramural contest held in February. In the semi-finals Joe fought Tony Disantis. This was his long-awaited-for bout, as he lost the decision to Disantis in the fourth round two years ago. This year, however, the battle lasted only three rounds, Joe getting the nod at the conclusion of nine minutes of fighting. The fight was rather slow on the part of both boxers, Joe winning because of showing a little more aggressiveness and doing a bit more jabbing.

In the final bout on Intramural Night, Joe knocked his man out in the second round and was again awarded the University championship. He received another medal to add to his collection, now having four such awards, one from Ohio State University and three from Reserve.

"I am graduating in June," says Joe, "and I certainly would like to see the Pharmacy

School win more championships. Tony Castrovinci will be back to win the 125 lb. class, so let's see a "Pill Peddler" get in there and take the top position in the 135 lb. class."

INTRA-PHARMACY BOWLING

The unexpected will happen! Pharmacy School finally has struck upon something to create interest other than the degree of attainment of knowledge.

That which performed the miracle is bowling. A call was issued in the early days of the first semester for the formation of the league. The response was much better than expected, eight teams entering under the following names (note the originality of some of them): Oleumshes—last year champions; Green Cats—'30 freshmen; Phi Delta Chi—fraternity team; Question Marks—'30 freshmen; Faculty; Woodcutters—a heterogeneous outfit of bad bowlers; Jumjus—a flock of incompetent juniors; and the Incomparable Aristocrats—four sedate, self-conscious, quiet seniors. CHECK!

All teams were composed of four men. Two games were bowled every week with an opponent, each game counting one point and the total number of pins for both games counting a third point.

After the smoke of the first nine weeks and the first round had cleared away, this is what Secretary Kroeger posted as a report: The Oleumshes and Green Cats had fallen by the way. Freshmen of the latter team evidently were unable to keep up in both scholastic work and scholastic sport, so the bowling league suffered. The manager of the Alhambra Alleys posted on his bulletin board that games bowled on the alleys were twenty cents a line and that those bowled in the gutters were twenty-five cents. This immediately and automatically eliminated the Oleumshes from further competition.

The Results

	Won	Lost
Incomparable Aristocrats	13	1
Jumjus	10	4
Faculty	9	5
Woodcutters	9	5
Question Marks	5	9
Phi Delta Chi	3	11
Green Cats	0	14
Oleumshes	0	14

Individual Averages

Stockhaus (Faculty)	188
Farris (Aristocrats)	182
Lauria (Jumjus)	174
Celke (Aristocrats)	172
Meresicky (Woodcutters)	170
Stimson (Faculty)	162
Fitch (Aristocrats)	162
Kroeger (Jumjus)	156
Bruehler (Phi Delta Chi)	154
Russo (Question Marks)	153
Suntala (Woodcutters)	153
Rauschkolb (Phi Delta Chi)	152
Kaufhold (Jumjus)	150

The individual high lights of the first round were two fine showings in the high single game division. Meresicky polished the pins for a beautiful 244 game which was followed by an extraordinary 233 game cracked out by Stockhaus. Both men bowl in the anchor position of their respective teams.

Stockhaus again showed his bid for supremacy by smashing a 405 series for two games. His effort was approached to within one pin by a 404 total by Farris.

In the individual team performances, the Aristocrats stood out above all the rest. They went to the head of the pack with a well-earned 797 for high single game, finishing the day with 1475 for a grand total. It also happens that this 1475 is high for a two game series. The Faculty landed second high single with 725 and Jumjus crashed 1408 to be second in the two game total.

These results in themselves show that a fair brand of bowling is prevalent in the School of Pharmacy. The one great asset of the league is the formation of a closer relationship between the Faculty, upper-classmen, and lower-classmen. And it can be truthfully said that the freshmen know intimately more seniors than ever before. The reverse of this is true also. This is especially beneficial to the freshmen, for contact on the alleys leads naturally to contact in scholastic fields. The "hitch" comes, however, in that ninety-five per cent of the time the juniors and seniors do not know anymore than the freshmen (irony).

During the course of the first round a few people made themselves famous for technique in certain fields. Valway and his round-house curve are spectacular. Obester

acquired the name of the "Slow-Motion Kid." It has been decided that Kroeger would be a much-improved bowler if he could do the hundred-yard dash before delivery. Lauria never missed a ten-pin all season. Sabo was a past master at gutter bowling before the price went up. Farris had to have his bowling shoes to do justice to the game. And more than one still think he is just a bologna bowler—shoes and all.

One phase which is indeed pleasing is that all the teams carried on in a perfectly sportsmanlike manner. Although they had no bowlers who gained recognition in the top places and in spite of the fact that their team finished in the "also rans," the Phi Delta Chi boys showed the best sportsmanship in their losing efforts. This is the one thing which will perpetuate the league for Pharmacy School in seasons to come. It is hoped by the senior class that intra-pharmacy bowling competition will continue.

A CHAMPIONSHIP FOR PHARMACY

The five-man team representing Pharmacy School in the intramural bowling competition won the title of their league with colors flying. The Phi Gamma Delta fraternity team of Adelbert also ended the season at the top of their division.

In the roll-off to decide the University championship, slated for three games, total pins, Pharmacy had a 223 pin advantage at the close of the second game and the Phi Gams folded up. It is well-known that the boys in this organization never quit if they have a fighting chance, but the members of the Pharmacy team were not to be denied. This brought the school its first cup in this type of intramural competition.

The team consisted of Alex Celke, Bob Fitch, Jack Meresicky, Mike Lauria, John Obester, "Bunk" Farris, and Bob Stockhaus. It must be added that a due share of the victory belongs to Ruth Kotershall, for she was the only consistent rooter to help the team in crushing all opposition.

Electrician (from top of building from which four wires dangled): "Bill, catch hold of two of them wires."

Bill: "Right."

Electrician: "Feel anything?"

Bill: "No."

Electrician: "Well, don't touch the other two, there's 2,000 volts in them."

O WAD SOME POWER THE GIFTIE GIE US TO SEE OUR- SELS AS ITHERS SEE US!

U. S. AND US

So much is written of the United States of America, both in a spirit of admiration and in criticism, that one approaches their shores with a strangely mixed feeling, half critical prejudice and half hope of being thrilled or shocked. I was disappointed. The far-famed sky-line seemed so terribly small, though I never dared to say so to any American: I should have been flayed alive. On my second visit, however, remembering my earlier disappointment, I expected nothing and was blessed. It was one of the hottest days I remember, and a heat haze veiled the renowned sky-line; but, as I watched the towers and spires emerge from the drift of mist, for the moment that hard-boiled "little old N'Yak," presented an appearance of delicate and ethereal beauty resembled a dream city. Of course, my American friends expected me to be immensely impressed, and I was a bitter disappointment to them, for I was most struck by the fact that Black-eyed Susans and Golden Rod grow wild there, and both of these I cultivate in my garden. Another mild thrill came from the fact that in ladies' rest-rooms there are electric curling-irons, which heat long enough for the repair of the coiffure if a nickel is inserted.

There are so many things that we do better than they do in America that I will stress those points in which they excel. Ice cream! Fifty-seven varieties seem a mere nothing. It was almost worth the journey just to eat the quarts of various flavours and types that I enjoyed in my short visit. And then cold water. I happen to be one of those people who enjoy drinking it, and so keenly appreciated the glass of water which is placed before every patron directly he sits down in any restaurant or cafe, and which is renewed constantly. Also a fountain, complete with a supply of destructible cups, is to be found in the lobbies of most large buildings.

There is a law in the States that a separate towel must be provided for each person in every cloakroom or washplace however humble, and these towels range from crepe paper ones or an "everlasting" roller-towel, of which only about twelve inches can be unrolled at the time, to tiny linen hand towels attached by a ring to a chain disappearing through the floor, which chain carried the used towels to the floor below.

Pharmacies

Now in reference to the pharmacies of "God's Own Country." There are two types. One is a pukka pharmacy—even more sternly restricted to purely pharmaceutical matters than are ours, but of this type I saw only two during my quite extensive travels by road through seven States. The other type is the drug-store, which sells ice-cream,

bathing-suits, sandwiches (freshly made and toasted at the counter), candy, stationery, and incidentally, may have a dispensing-counter. This drug-store will often call itself a pharmacy, as witness this legend, copied from the front of an envelope containing photographic work: "State Pharmacy Coy. Already the Popular Drug Store. Telephone —. Lunch at our fountain. Hot coffee and chocolate, tasty sandwiches, either plain or toasted; home-cooked pastry of all kinds. We use real cream in our cream-sodas. Our soda-water is made of pure spring water. We are maintaining a free delivery service in B— and B—. We will call for and deliver your prescriptions, and will deliver any merchandise if you will give us a call. Save your cash-register receipts; they are valuable—5 per cent credit on all slips. You return \$50 and we give you a credit-slip of \$2.50. We have one of the finest prescription stocks in the State."

Most Americans are very self-centered, and have little or no knowledge of any place outside the Union, or, indeed, of any town beyond the "Home Town." A quite dear old lady of New England said to me: "You come from over the water, don't you?" I explained that I was English. She said, after a moment's thought, "Ah! well, it doesn't matter what you are if you are good." And one last word. A burly gentleman on the boat: "You English?"—"Yes."—"Thought I rekernised the accent!"—Only my sense of humour saved him.

—D. P. Adams in British Pharmaceutical Journal

Efficiency Expert (recently hired by business manager): "See that little shrimp up there by the door? I just gave him an awful bawling out for loafing on the job!"

Business Manager: "Ye Gods! That's the boss!"

Clara (a dentist's daughter): "Well, dear, have you asked dad for my hand yet?"

Henry (very bashful): "No. Every time I step in his office I lose courage. Today I allowed him to pull another tooth."

"Hello, Jake," said the farm hand. "Why ain't you comin' to the weekly dances down at the grange hall?"

"Ho, ho—dances!" said Jake. "I could never learn to dance."

"You could, too. It's dead easy," replied the farm hand. "All you got to do is keep turning around and wipin' your feet."

An Irishman stopped before a grave in a cemetery containing the tombstone declaring: "Here lies a lawyer and an honest man."

"An' who'd ever think," he murmured, "there'd be room for two men in that little grave."

George the plumber rang the bell, and, as it happened, both the master and mistress of the house came to the door.

As they stood in the hall, the husband, who was very methodical, said: "I wish, before we go upstairs, to acquaint you with the trouble—"

"I'm very pleased to meet you, mum," said George.

As It Is Spoken

The wife and daughter of Lieutenant Berry of the Great Lakes naval training station, approaching a gate to the station, were halted by a sentry on duty there who had orders to allow no one to enter by that gate.

"Sorry, but you'll have to go around to the main gate."

"Oh, but we're the Berrys."

"Lady, I don't care if you're the cat's meow, you can't go through this gate."

"Is she a nice girl?"

"Oh, moralless."

Not The Only Place

A bank takes on a number of young men during the summer. On their salary receipts is printed a legend something like this:

"Your salary is your personal business—a confidential matter—and should not be disclosed to anybody else."

One of the new boys in signing this receipt added:

"I will not mention it to anybody. I'm just as much ashamed of it as you are."

—Old Colony News Letter.

The Reporter: "And to what do you attribute your wonderful age?"

The Centenarian: "Well, as far as I can make out, sir, it lies between somebody's salts and someone's old ale, though there's a beef extract and invalid port wot's in the runnin', but the bargainin' ain't finished yet."

A Blanket Finish

It was a good many years ago that Deacon Callahan took his wife to the races.

Just as the horses were lining up at the barrier, Mrs. Callahan grasped the deacon nervously by the arm, and, in a voice which was filled with emotion, asked him for a safety pin, meanwhile grabbing frantically after something that seemed to be slipping around the knees.

Just then someone nearby shouted, "They're off!" And Mrs. Callahan fainted.

Why Doctors Die Young

It is two o'clock in the morning. Dr. Blank has just returned from a case on which he has been working since seven. Just as he gets into a sound sleep, the telephone rings. He wakes with a start, rubs his eyes, and mechanically leans over and takes the phone.

"Is this Dr. Blank?"

"Yes."

"Doctor, could you tell me a word of eight letters, the third letter of which is 'l' and the fifth 'd,' the word meaning a disease prevalent among the house mice of Zanzibar?"—St. Louis Star.

A rich but very eccentric man died. The clergyman, who was young and new to the parish, thought it a fitting opportunity to call and comfort the widow. "You must not grieve," he told her. "The body that lies here is not your husband. It is merely a husk, an empty shell—the nut has gone to heaven."

Canvasser: "Madam, will you donate something to the new hospital?"

Mrs. Clancy (who has just finished an argument): "Well, ye might step in an' take a look at Clancy. Maybe he'd do."

The night was dark and misty and the man was thinking as he journeyed on toward his home of the cheerful fire that would greet him and the smile with which he would be met.

Tip-toeing up the steps, he saw his wife sitting in the room on another man's lap. Quietly he withdrew into the hall and there he took out his knife and slit the strange umbrella full of holes. Then he sneered: "I hope to God it rains!"

"Which came first, Yom Kippur or Easter?"

"Really, I can't say; I never follow the races any more."

A vacuum is most recently defined as the conversation between a bridge fiend who does not play golf and a golf fiend who does not play bridge.

Freshman: "What keeps the moon from falling?"

One of the Incomparables: "Beams, my boy, beams."

Ray: "Saw the lake today."

John: "Did it recognize you?"

Ray: "Well, it 'waved' towards me."

Even As You and I

Pater (over long distance): "Hello, son, why didn't you make better grades?"

Romeo: "Can't hear you, father."

"I say, Rommy, do you need any money?"

"Yes, sir, send me \$50.00, pater."

Druggist: "You want a pound of ochre?" Is it yellow ochre for tinting curtains?"

Small Boy: "No, it's tappy ochre wot Ma makes puddin' with."

Miss 1931

"Darling, may I kiss your hand?" asked the young man with old-fashioned ways.

"Sure, kid, hop to it," said the Modern Jane, "but be careful you don't burn your nose on my cigaret."

Mistress: "Nora, were you entertaining a man in the kitchen last night?"

Maid: "That's for him to say, ma'am. I did my best."

Sweet Thing (disgusted): "My boy friend has cold feet."

Fond Auntie: "Shame on you, young lady. In my day we didn't find out those things until we were married."

Then there's the one about the village doctor who ordered Sandy to take his wife away where she could have salt air. That afternoon Sandy took her out in the hammock and fanned her with a salt mackerel.

The Pharmacon greatly desires several copies of two previous issues, namely, April, 1927, and January, 1929. It is hoped that some of its friends will be able to mail in one or both copies of the above issues. Grateful acknowledgement will be made.

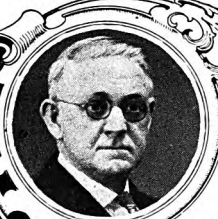
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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Report on Medical Plant Garden—The Squire Valleevue

By Professor F. J. Bacon

The medical plant garden was organized to serve as an experimental garden for the cultivation of drug, poisonous and related plants. The purposes of the garden are:

1. To investigate the cultivation of medicinal plants.
2. To produce a supply of authentic vegetable drugs to be used and developed into preparations used by the University Hospitals.
3. To supply plants either in the fresh state or in the dried condition for research work.
4. To furnish a field laboratory to study plants in connection with course work in the field of Botany and Pharmacognosy.

Crude Drugs

Drugs are either organic or inorganic substances that are used as medicines or in the preparation and composition of medicines. The term, "drug," as commonly used is an extremely loose one and has been subjected to various interpretations. In the medicinal plant garden, we are concerned with cultivation, propagation, and preparation of drug plants. Such medicinals include many of the most important items of the modern *materia medica*. As examples of vegetable drugs of primary importance, there may be cited crude opium, cinchona, belladonna, digitalis, and senna. Plant products of this type, unground and untreated, except for "curing" by drying or by other treatment necessary to prevent decay or deterioration before manufacture, are known as crude botanical drugs. These must usually be further treated or compounded with other materials before they are used in medicine.

Trade in Crude Drugs

There is hardly a country that does not supply some types of crude drugs to commerce.

Thousands of plant species have been used in the treatment of the sick and even now, when scientific tests have discarded many botanical drugs, we still have a call from the medical profession for over five hundred different crude drugs.

Production of Drugs

Drug cultivation has been carried on more or less extensively in Germany and Austria, and to some extent in Italy and Spain. In each of these countries, as well as others, large quantities of drugs are annually collected from wild growing plants. Most of the quinine used in medicine today is cultivated in Java, the menthol is extracted from plants grown in Japan, and the world's supply of ephedrine is extracted from plants collected in their wild state in China.

Experimental cultivation of a number of crude drugs has been carried on for a number of years by the United States Department of Agriculture, Colleges of Pharmacy, Agricultural Experiment Stations, and by a few drug firms.

The importance of the work on cultivation of medicinal plants was greatly emphasized by the European War, which demonstrated to the people of the United States the extent to which we are dependent on several European countries for our supplies of crude drugs. In the United States, at present, there are several drug farms supplying in a few instances sufficient material for our consumption and in some cases enough for export trade. The larger part of the peppermint oil of commerce is cultivated and distilled in the State of Michigan and northern Indiana. Several pharmaceutical houses cultivate and process special types of vegetable drugs for their trade.

For many years the drug market has been supplied with a number of drugs obtained from our wild plants by drug collectors. The wild

plants have disappeared more and more, and, with the exception of ginseng and possibly golden seal, few systematic attempts have been made to replace the disappearing medical resources of the field and forest. Furthermore, the condition of the drug market has become such that the average American druggist often does not recognize a drug when he has the opportunity to see it. Furthermore, the crude drugs on the market today are grossly adulterated due to the fact that collection has been left largely to the most ignorant and shiftless representatives of our rural communities. The larger pharmaceutical manufacturers have been among the first to appreciate the situation and have endeavored to cultivate plants insofar as their own demands are concerned. It should be one of the garden's first duties to give the pharmaceutical student, our future pharmacist, an opportunity to get acquainted with the best specimens of that class of medicinal merchandise from which the store has received its name. The garden has supplied this year samples of well cured drugs for class use and material for use in the manufacturing laboratory.

Phytochemical Research

The popularity of animal drugs, vitamins, and synthetic medicinal products has tended to direct the efforts of research works away from plant products. The greater number of dependable and useful substances of natural origin are forgotten because of the emphasis placed upon synthetic products by the chemical industry. If it had not been from the leads obtained from natural products, many of the synthetic therapeutic products would not have been prepared. The standard of comparison is often the natural product. Since the isolation of the alkaloid ephedrine from the Chinese plant, Ma Huang (*Ephedra Sinica* Staff.), a new stimulus has been given to the study of plants in the hope of discovering new medicinal products. In this connection members of the staff of the School of Pharmacy are engaged in phytochemical studies on Black Cohosh (*Cimicifuga racemosa* L.), Digitalis (*Digitalis purpurea* L.), Pumpkin (*Cucurbita Pepo* L.), Peppermint and related mints (*Mentha* species), and on other crude drugs produced at the pharmaceutical garden last year.

The garden during the past season had one acre devoted to the field cultivation of the following plants:

Anethum graveolens L.
Atropa Belladonna L.
Brassica species

Cannabis sativa L.
Carthamus tinctorius L.
Carum Carvi L.
Chenopodium ambrosioides an-
thelminticum L.
Cnicus benedictus L.
Coriandrum sativum L.
Datura fastuosa L.
Delphinium ajacis L.
Digitalis purpurea L.
Foeniculum vulgare Mill.
Helianthus annuus L.
Hydrastis canadensis L.
Hyoscyamus niger L.
Matricaria chamomilla L.
Mentha arvensis var piper-
ascens Hol.
Mentha citrata Ehrh.
Mentha piperita L.
Mentha spicata L.
Nepeta cataria L.
Ocimum basilicum L.
Origanum Majorana L.
Papaver somniferum L.
Pelargonium odoratissimum
Ait.
Rhamnus Purshiana DC.
Ricinus communis L.
Ruta graveolens L.
Salvia officinalis L.

Dill
Deadly Nightshade
Mustard
Hemp
Safflower
Caraway

American Wormseed
Blessed Thistle
Coriander

Larkspur
Foxglove
Fennel
Sunflower
Golden Seal
Henbane
Camomile

Japanese Mint
Bergamot Mint
Peppermint
Spearmint
Catnip
Garden Basil
Sweet Marjoram
Opium Poppy
Rose Geranium
Cascara Sagrada
Castor
Rue
Sage

Digitalis

Digitalis is a valuable remedy commonly grown in flower gardens as "foxglove." The leaves of the plant are used as a heart tonic. The plant grows wild throughout a wide range in Southern and Central Europe, whence it has

been shipped to the United States. The cultivation of *Digitalis* has attracted some commercial cultivation and has been reported from several states, usually in small plots. The plant has escaped and grows wild in the mountains of the Pacific Northwest, where considerable quantities were collected during the World War. Owing to the collector's unfamiliarity with proper methods for collecting and handling the crop, the product was usually of inferior grade.

The potency of American grown *Digitalis* is unusually high and in the past few years several manufacturers have grown sufficient drug for their own use.

The garden has under cultivation one-half acre of *Digitalis*. Last fall a good supply of leaves and seeds were harvested. The leaves are being processed and made into preparations by the manufacturing department of the School of Pharmacy for use in the University Hospitals. The Department of Pharmacognosy is at present conducting research on the stabilization and assay of the leaf grown at The Squire Valleevue.

Safflower

Safflower (*Carthamus tinctorius* L.) has been cultivated in India and Egypt for many years as an oil crop. The oil possesses drying properties and the oil cake is valued as a stock feed. In the manufacture of paint, varnishes, oil cloth, linoleum, and allied products, large quantities of drying oil are required. In the United States at present the principal drying oil used by these industries is linseed oil, derived from flaxseed, of which about one-half the quantity required has been produced in this country in recent years, the remainder being imported from Argentina.

Experiments in growing Safflower as a farm crop have been conducted in sections of the Dakotas and Montana. In order to aid the Bureau of Drug Plant Industry of the Department of Agriculture, a co-operative experiment has been undertaken on the culture of a strain of Safflower imported from Russia. (*Carthamus tinctorius* L. var. *Buchara* No. 7.)

A small amount of seed was sent to us last year, and, propagated at the garden, yielded 2010 Gm. of seed. The department of Agriculture has commissioned us to cultivate the plant another season, on a semi-economic scale, to determine the value of the special variety of Safflower.

Shade

Shade culture of medicinal plants as well as many other plants of the indigenous flora of the United States has been increased during the past year. Many species of plants have been introduced into the wooded areas of The Squire Valleevue by Miss Harrison. Due to her interest in establishing a wild flower garden growing under natural conditions, the greater share of plants indigenous to this region may be found growing in the woods. This phase of the work is of great value to our students of botany at the University.

Mint Culture

Mint culture is established in Ohio in Harden County west of Kenton. The peppermint plant is cultivated and distilled for the oil on a commercial basis. The garden is conducting experiments on the classification of the genus *Mentha* and on the phytochemical studies on several varieties of plants in the genus. At present six species of mints have been successfully cultivated and several other species will be added this year. We are conducting co-operative experiments with Dr. Nebel of the New York State Agricultural Experiment Station on several mint hybrids developed in New York. Twelve new types of mints will be planted at the garden this spring.

The examples cited point out a few of the problems presented to the garden for study. We have been assured of increased acreage this year and hope to be able to continue our experiments and to add to the number of plants in the cultivated as well as in the natural shaded areas of the garden. We hope also to be able to continue the botanical and pharmacognostical research in connection with our plantings and contribute to the scientific information in the field.

Acknowledgments

The Department of Pharmacognosy and Botany desires to express its appreciation and thanks to Mr. Andrew Squire for the interest and the support that he has given in establishing this garden at The Squire Valleevue.

We wish also to thank Miss Harrison, Mr. Clarke, and others of her staff who have contributed in their respective fields to the success of this enterprise.

The Department of Pharmacy has co-operated with us in the manufacture of drugs cultivated at the garden by preparing the crude material into the various forms of medication for use in the University Hospitals.

CHEMOTHERAPY

By George H. Gerlach, '32

One hundred and three years have passed since Wöhler prepared the first organic compound, namely urea, which had ever been prepared synthetically. This impetus which organic chemistry received in the classical experiment of Wöhler has found its way into the synthetic production of medicines. Probably the first synthetic drug which enjoyed wide use in the hands of the medical profession was antipyrine, prepared by Knorr in 1887. A certain groundless prejudice which had to be overcome existed against the use of this and similar compounds. However, with our increasing knowledge of organic analysis and synthesis, our ability to determine definitely the structure of groups within the molecule, and with the constantly growing refinement of pharmacological methods, a new science has gradually been developed in our chemical laboratories.

Chemotherapy, the word coined for this science by its founder and most distinguished exponent, Paul Ehrlich, has for its purpose the discovery of definite chemical compounds which have a specific action upon the organism responsible for the disease, yet are relatively harmless to the organs of the patient. The discovery of such chemicals is one of the most difficult tasks confronting the medical research worker because all chemicals are more or less injurious to the human body.

Studies upon the relationship of chemical structure to therapeutic activity have been responsible for producing some very important products employed in medicine today. Willstätter investigated the structure of cocaine and discovered that certain organic groups within the molecule were responsible for its characteristic action. This work led to the synthesis of more simple organic compounds patterned after the active groups in the cocaine molecule, and, as a result, a number of valuable local anesthetics, including novocaine, anesthesin, and butyn, were placed upon the market. These compounds are potent local anesthetics, are non-habitforming, and are less toxic than cocaine, the natural alkaloid after which they were patterned.

Chloral hydrate, the first synthetic hypnotic, was prepared by Liebig in 1832, and its pharmacology was studied by Lieberlich in 1869. Since the production of this first hypnotic drug, organic chemists have produced a host of others

in the search for the ideal compound. In 1888, Baumann and Kast produced sulphonal, and the other members of this series, namely tri-onal and tetronal, followed a short time later. In 1882, Conrad and Gutzeit synthesized barbital and its sleep-producing properties were discovered in 1902 by Fischer and Mering. This opened up a fruitful field of chemotherapeutic research in which Dox has indicated that there appeared to be a specific group within the molecule responsible for the characteristic hypnotic activity. Luminal, dial, amytal, alurate, and phanodorn, all derivatives of malonyl urea, were synthesized upon the basis of this assumption.

The amazing growth of the aniline dye industry in Europe supplied the medical research worker with thousands of organic chemicals for chemotherapeutic research. It was Ehrlich, a chemist of great vision, who grasped the opportunities offered by the great German dye works. Largely through his efforts, chemotherapy has achieved its greatest degree of success in the synthesis of bactericides. The attaching of germicidal metallic atoms to carbon has brought mankind inestimable benefits in the treatment of a number of diseases. Thus Ehrlich, with the assistance of some able collaborating chemists and bacteriologists, worked with organic arsenic preparations in an attempt to discover a cure for African sleeping sickness. Atoxyl, such a preparation, was found to be somewhat effective for this disease, and its discovery led to an expedition to tropical Africa for the purpose of trying out this new remedy. The expedition was headed by Robert Koch, the discoverer of the tubercle bacillus, who soon after his famous discoveries of disease producing bacteria had taken an active interest in chemotherapy.

Stimulated by the success of atoxyl in the treatment of sleeping sickness, Ehrlich, Uhlenhuth, and others attacked the problem of the treatment of syphilis with organic arsenicals. They devoted their combined efforts to the solution of this problem, beginning first with a thorough study of the action of various new organic arsenic preparations upon trypanosoma infected mice. Through a long and tedious investigation, with the assistance of one of the great dye works, more and more effective arsenicals were discovered until the 606th compound appeared to have the proper qualities of an efficient remedy. In 1909, salvarsan was given to the medical profession. Salvarsan or arsphenamine, as it is called in this country,

when properly used in early cases of syphilis will produce a cure with great rapidity in the disappearance of all symptoms and signs of the disease. In advanced cases, a few doses will influence the disease sufficiently so that it can not be transmitted. Various modifications of arspenamine such as nearsphenamine and sulpharsphenamine have since appeared and are equally if not more successful than salvarsan itself. Sulpharsphenamine and tryparsamide (which is useful in the treatment of general paralysis) are American contributions to this field of research.

Another important advance was the discovery of the value of bismuth in treating syphilis. This is more effective than mercury and is sometimes used in chemical combination with arspenamine.

The discovery of "Bayer 205" may be regarded as another milestone in the progress of chemotherapy. This compound, sometimes known as Germanin, is also used to combat trypanosomes. Both "Bayer 205" and plasmochin, a new malarial remedy effective in the treatment of all the different types of malaria, were discovered in the dye factories of Germany.

Chemotherapy has also played its part in the investigation of chaulmoogra oil in the fight against leprosy, and the search for chemotherapeutic agents of value in the treatment of tuberculosis has gone forward ever since the initial attempts made by Koch, who discovered that certain compounds of gold in very high dilution inhibit the growth of tubercle bacilli in the test tube.

Experiments with optochin (closely related to quinine), proflavine (an organic dye), and mercurochrome have met with varying success in the treatment of pneumonia, and, although, no effective remedy against pneumonia in man has as yet been discovered, animal experiments hold out some promise in that direction.

In 1920, E. C. White prepared mercurochrome, a fluorescein dye which retains the bactericidal value of mercury yet reduces its toxicity to the host harboring the organism. This, in dilutions of 1 to 1000, kills *Bacillus coli* and *Staphylococcus aureus* in one minute. Mercurochrome, hexylresorcinol, and a number of other drugs have recently been used successfully as urinary antiseptics. These drugs when injected into the blood stream will impart to the urine antiseptic properties to such an extent that the ordinary disease-producing germs in the urine are killed off.

During the war, Dakin and Carrell developed

antiseptic solutions of hypochlorites and mild organic derivatives of hypochlorous acids which readily liberated chlorine and were used to irrigate wounds. These solutions aided healing and undoubtedly saved many patients who otherwise would have died from infection.

At the present time, the discovery of new chemotherapeutic agents is still more or less a matter of good luck because the mechanism of action of most of the chemicals upon animal tissue and bacteria is not yet fully understood. Intensive work on these fundamental problems and a greater knowledge of the chemistry of micro-organisms are badly needed to build up a scientific basis for chemotherapy. Such a knowledge would undoubtedly lead to practical results and the discovery of more useful drugs.

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COMMENTS ON TUBERCULOSIS

By William K. Kutler '33

Tuberculosis is the outgrowth of civilization. From time immemorial it has been with us; even in the time of the ancients it was prevalent in cities, in camps, and in mines—indeed everywhere that people congregated, this dreadful scourge was to be found. Even at the present day, seventy per-cent of the people in densely populated districts are said to be infected with this disease. Only two per-cent of the total population have pulmonary tuberculosis, which is the most serious form of the disease.

The germ of the disease was discovered in 1882 by the great German scientist, Koch. Only after hundreds of experiments upon animals and after numerous studies of afflicted persons did Koch come to a definite conclusion: namely, that the Great White Plague is caused by tubercle bacilli.

There are three major factors which determine whether a person will develop the disease after exposure to it. First, the age at which he becomes infected with the tubercle bacilli is very important. It can readily be seen that if the bacilli enter his system while he is still in his infancy, there is definitely less chance of his contracting the disease. This, of course,

is due to the fact that his body can regulate itself in a short time to cope with the progress of the murderous germs.

Second, comes the strength of the bacilli. It is only logical to contend that if the bacilli are in a weakened state, they are necessarily incapable of creating any great degree of havoc in the person infected. Indeed, it is the weakened germs which tend to make the individual immune from the disease, for, as the body assimilates them, the system reacts as though treated with an anti-toxin. If, however, the bacilli are in a healthy state, the person whom they have chosen for their home is in grave danger unless the condition of his body is such as to deter the progress and multiplication of the germs.

Third, is the physical resistance of the human body. Here we come to a very perplexing situation, one that is very difficult to explain. The body, if it is to resist the ravages of the disease, must be in a very healthy condition and at the same time be without sufficient nourishment for the bacilli. If the body is able to resist the bacilli, it does so by manufacturing cells which wall off and isolate the germs so that they can do no harm. If, however, the bacilli prove too strong, the parts attacked will start to decompose as the cells give before the assailants.

There are very few points concerning tuberculosis about which there is no dissension. A proof of this is shown in that when a questionnaire relating to tuberculosis was sent to all prominent medical men of the world, hardly two men agreed exactly upon any one point. Thus, it can be seen that due to the multitude of conflicting opinions among the physicians, there must of necessity be many wrong treatments of the disease. This situation can only be deplored inasmuch as it is almost inevitable.

Strangely enough, doctors with different opinions may be able to show ample proof for their contentions. Consider this case: One doctor decided to find out definitely whether a person could contract the disease by coming in contact with a tubercular victim. To do this, he went to the extent of sleeping with the infected person. This doctor did not contract the disease. On the other hand, a different doctor performed identically the same experiment and did contract the disease.

One point about which there is now very little dissension is the matter of the climate. It is definitely agreed that it has little to do with a tubercular person's chances for recovery. The major factors are food and rest. It is shown that the death rate depends upon the

economic conditions. When wages are low and work is hard, it is then when the death rate is highest. This is due to the lack of food and rest.

Let us now consider the matter of immunity. It is a known fact that tuberculosis shows no discrimination as to its victims; all are susceptible. Some persons claim that there exists such a thing as individual immunity, but this belief is absolutely absurd. No one can possibly resist the disease if he is placed under certain conditions favorable to the growth and multiplication of the tubercle bacilli. However, there does exist such a thing as racial immunity.

By racial immunity I do not mean that all members of a race will not contract the disease, but that certain races are decidedly less affected by tuberculosis than others. Examples of this are the Jewish and Italian people. For centuries now, they have been living in crowded, unsanitary quarters without proper food, sufficient sleep, or adequate recreation. Thus they have become to a certain degree inured to the conditions which tend to lead to tuberculosis. It is readily seen that their long and continual contact with the agents of the disease has regulated their systems to the extent that they are able to repulse all serious attacks.

In direct contrast with the Jews and the Italians are the Irish and the Negroes. Both of these latter races have been accustomed for centuries to the out-of-doors. They were as a rule free from disease and sickness, and as a result their blood has never assimilated the germs. Their bodies, therefore, are fertile fields in which these murderous creatures, the tubercle bacilli, find nourishment to thrive and multiply. In the city of Cleveland, there are seventy-two thousand Negroes, eight per-cent of the city's total population. However, according to Dr. Ellery P. Edwards, chief of the Tubercular Bureau in Cleveland, they are responsible for thirty per-cent of Cleveland's tuberculosis deaths.

Every effort is being made to rid humanity of tuberculosis. Approximately five hundred million dollars is spent annually to accomplish this result. Naturally, much of this money goes for the up-keep of sanatoriums built for the relief of those already suffering. Another large portion is used to educate the public as to the seriousness of the disease.

Every large city in the United States has some sort of organization whose purpose it is to fight this Great White Plague. The City of Cleveland has developed and built up the Bureau of Tuberculosis under the leadership of

Dr. Edwards. Connected with this organization are nine health stations which are located conveniently throughout the city. They are open daily from one to two-thirty in the afternoon except on Tuesdays and Thursdays.

Each health station is supervised by a competent head nurse under whom are ten to fifteen nurses. Their work consists not only in dealing with the victims of tuberculosis but also in locating those in contact with the victims. Lists are also kept of their families. At present, there are five thousand known tubercular cases in the city.

One of the many duties of the Bureau of Tuberculosis lies in educating the masses as to the means of combating the disease. All manner of leaflets, pamphlets, books, and magazines discussing the various phases of tuberculosis, and ways of avoiding dangerous infection are distributed continually. Another effective way in which the Bureau spreads its propaganda is to place posters in the school rooms of all school houses. These posters contain a list of "Don'ts." Their purpose is to teach the school children simple facts about tuberculosis in such a manner as to register them indelibly upon their minds.

Then, too, there is that great national organization, the Anti-Tuberculosis League. This organization is responsible for most of the legislative measures passed for the purpose of exterminating tuberculosis.

Several of these laws are:

All milk must be certified and obtained from tuberculin treated cows.

All milk must be sold according to specified grades.

All milk must be pasteurized, and the pasteurization must be at 145° F. and for a period of thirty minutes.

All victims of tuberculosis are forbidden to work in any food establishment.

There is no doubt that much fine work is done by sanatoriums in their efforts to cure tubercular people. Here in Cleveland, we have the City Hospital and also the Warrensville Hospital, two institutions which do excellent work. Because of the great number of persons afflicted with tuberculosis in Cleveland, there are being installed in Warrensville Hospital one hundred new beds. The patients are given the necessary treatments. Ninety per-cent of those who are treated while still in the early stage are cured. Fifty per-cent of those

treated after the disease has gained a rather firm foothold are cured. Only five per-cent of those treated in the advance stages of tuberculosis are saved.

When a cure for tuberculosis is discovered, medical science will have made its most important contribution to civilization. Although no definite cure is yet in sight, it is inevitable that one will eventually be found. Let us hope that the time is not far distant.

Cleveland's New Medical Arts Building

By Nelson K. Rauschkolb, '32

In a novel written by M. Borden several years ago entitled, *Flamingo*, one of the characters, an architect, foretells the future of New York City. He pictures it as a metropolis of "monstrous structures," as he terms them, covering entire city blocks and so completely equipped for human service that the tenants have little need of ever going outside their walls. The author's conception at that time may have seemed to be a fanciful one, but now it appears to be a sound prophecy, for the architect was merely forecasting such structures as we now have.

In the City of Cleveland we have something similar to the above, known as the Cleveland Terminal Group, located on the Public Square and occupying several city blocks. The Terminal Tower itself, which rises fifty-two stories into the air, is connected directly with the other buildings of the group, namely, the Union Station, Hotel Cleveland, Midland Bank, Builders Exchange, Higbee Building, and the Medical Arts Building.

The last-named building, eighteen stories in height, is one of the largest structures in the country devoted exclusively to the medical professions. It is distinctive in design, the exterior being of soft limestone to the top of the third story, with cream face brick beyond that floor to the roof. The upper floors are cream terra cotta. The Ontario facade has a court extending from the street to the roof. In this court is planted a beautiful garden of evergreens with an ornamental fountain in the center.

The two-storied lobby, which is on Prospect Avenue, is entered through a picturesque loggia. It has high fluted pilasters resting on walls of imported marble and crowned with ornamental

frieze and vaulted ceiling. The elevator lobby is finished with imported marble and ornamental ceiling. The elevator doors, constructed of cast statuary bronze, have images in individual panels depicting ancient medicine and pharmacy. The elevators themselves are constructed to travel 600 feet per minute, which is absolutely necessary in a building of this type where the time factor is so apparent. At the end of the lobby, directly opposite the main entrance, is a large bronze door, which gives entrance to the other buildings of the group by means of underground passageways. These passageways, constructed to appear as continuations of the corridors of each building, are approximately fifty feet below the surface of the street. They are constructed entirely of marble with the exception of the ceilings which are built of ornamented plaster with lights built in to give the desired effect.

With relation to transportation, there are considerations that give real and practical importance to these so-called tunnels. There is, first, the ever recurring emergency when speed becomes a matter of life and death. In such instances the provision for garage accommodations and the facilities for rapid transit are of incalculable assistance. Incidentally, many of the larger hospitals are situated near these lines of speedy transportation out of the Union Station.

In the planning of the building, every conceivable measure was employed to make it as convenient as possible for the two hundred or more doctors that will obtain space in it. Within its walls is a strictly professional pharmacy where the doctor may obtain his needs in the least amount of time and where he can send his patients with the utmost of confidence and safety. Another added attraction is the thirteen hundred car garage connected directly with the Medical Building and having entrances on the first nine floors. This arrangement makes it possible for the doctor to drive his car directly to his office. This obviates the lost motion of retraced steps between garage and offices. If one were to visit several of the offices, he would notice that there are no two alike. The reason for this is that each office is so constructed as to conform to individual predilection and need. The doctor, after renting space, has his own plans drawn and the office built in such a way as to best suit his own particular needs.

Parke-Davis & Co. Entertain Us

Fifty Pharmacy students visited the Parke-Davis Company, Detroit, Michigan, Friday, May 1, 1931. Afforded the same courteousness and hospitality as of previous years, the students were entertained royally in every detail from the trip through the plant in the morning to the banquet at Hotel Statler, concluding the program. To the Parke-Davis Company, then, the PHARMACON extends its gratitude on behalf of the students of Western Reserve Pharmacy School.

Pharmacy Students Are The Guests of The Goodrich Rubber Company

A group of approximately 250 persons, including members of the Northern Ohio Drug-gists Association and their wives, and 45 students of Pharmacy School, visited the Goodrich-Miller Drug Sundry Division of the Goodrich Rubber Company, Thursday, May 14th. Arriving anywhere from ten to eleven in the morning, the visitors were divided into groups of twenty and escorted throughout the plant where they witnessed many of the processes employed in the manufacture of rubber articles sold in the retail stores, starting with the crude rubber and ending with the finished goods. It is difficult to pick out any special process as most interesting, for each one had its distinctive features to hold the watchers in wonderment at the rapidity and systematic manner in which the various articles passed through the machines and finally entered the hands of the workers. The bathing cap department, however, proved quite attractive, the crowd concentrating here somewhat to look on as sheets of rubber entered one side of a cutter and came out the other side as bathing caps so fast that the process almost approached a Thurston trick.

Noon found the individual groups collected in the plant cafeteria for dinner. Realizing that continuous walking whets one's appetite, the chefs of the Goodrich Company had prepared a spread, complete from fruit cocktails to cigars, that was sufficient to satisfy even the most hungry of the 250 who sat at the tables.

Several short talks followed the dinner, the first by Mr. R. T. Griffith, vice-president and general manager of the plant.

Mr. Griffith impressed upon his listeners the fact that Miller guarantees its products to the utmost, and a few of his own words best convey this point. "Every article manufactured by the Miller Rubber Co. carries with it the heart and soul of each individual who works on it, for we want to be certain that it leaves the plant in the most perfect condition possible." The speaker gave some idea of the capacity of the organization in telling that the plant had facilities for the manufacture daily of 18,000 water bottles and 10,000 molded bathing caps, in addition to the other sundry products which contribute to the output. Mr. Griffith estimated that the Miller Division supplies from ten to fifteen pieces of household rubber goods for each American family annually, and added that the company furnishes between 40 and 47 per-cent of the drug sundries in the United States.

Mr. Peter Kadel, president of the N. O. D. A., spoke next, commenting on the trip about the factory, and thanking the Goodrich Company for the entertainment and courteous treatment accorded its visitors. Prof. N. T. Chamberlin added briefly to the words of appreciation, offering most hearty thanks on behalf of the faculty and students of the Pharmacy School, and stressing especially the educational value of the trip. In conclusion, Mr. Louis Ruxin, chairman of the Entertainment Committee of the N. O. D. A., gave a short talk commending the Goodrich Company on their excellent management of the visit.

The remainder of the afternoon was spent with a trip to the Akron Airport and Goodyear Hangar, where the mammoth zeppelin, "Akron," is nearing completion. About all one can say concerning this feature is that he is amazed by the grace, beauty, and size of the huge airship which is housed within the gigantic hangar, and that it is a sight which one is not permitted to witness often.

The PHARMACON, on the part of the School of Pharmacy, extends its thanks to the Goodrich Rubber Company and feels confident that the kindness and courteousness of this organization is something which will long be remembered by those of the student body and faculty who were privileged to make the visit.

Rho Chi Officers Are Formally Installed

Sigma Chapter of Rho Chi Honorary Pharmaceutical Society met Friday, April 24th, 1931, at the Faculty Club for dinner and the formal installation of the organization in Western Reserve University. Following dinner at 6:30 P. M., Dr. F. J. Bacon, acting as installing officer, presented the group with its charter and administered the oaths which made each one present a member of Rho Chi. Keys, the official emblems of the Society, were presented to those who had ordered them.

Official business concluded the evening and was concerned mainly with the election of officers for the coming year. As a result of the election, the following men will govern the administration of Sigma Chapter for 1931-32: Robert M. Porter, president; George Gerlach, vice-president; Earl Hester, secretary; and Harry F. Valway, treasurer. These men replaced those who had filled these offices temporarily until the chapter was officially installed. These included the following in the same order of office: Leroy D. Edwards; Alex Celke; Russell McArtor; and Robert A. Fitch.

The new officers then took charge of the meeting. Among the matters discussed were the standards upon which future election of members of the order will be based and the problem of admitting honorary members, especially those persons who had graduated from Pharmacy School prior to the time that the organization of Sigma Chapter took form.

It was necessary that a set of by-laws be drawn up for the Chapter, so President Porter appointed a committee for this purpose, selecting Dr. F. J. Bacon, chairman, Paul R. Hudson, and Rufus O. Farris. In conclusion, a delegate and alternate, Robert M. Porter and Mr. Edward Davy, respectively, were chosen to attend the Rho Chi National Convention, which will be held in conjunction with that of the American Pharmaceutical Association at Miami, Florida the week of July 27th, 1931.

Much credit is due Russell B. McArtor, for he had charge of the dinner and succeeded in staging a well-managed and satisfactory affair.

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EDITORIALS

The professional pharmacist has long made claim to "a place in the sun," as regards the public health. His education and training fit him for something more than a mere purveyor or dispenser. In defending his rights and prerogatives along this line, he has frequently been accused of invading the field of the physician. The pro and con arguments with reference to his defense are many and varied. However, one fact stands out in bold relief, so far as the public health is involved. A large portion of the general public does go, and will continue to go, to the drug store for medicines in order to treat its minor ills, without consulting a physician. Whether, under such circumstances, a drug store patron is ever advised to see a physician will depend largely upon the kind of professional man the pharmacist is. He may advise the customer to buy a proprietary medicine, or influence him in other ways that will have a direct or indirect bearing upon his health and general welfare.

In regard to the pharmacist's invasion of the physician's field, or counter prescribing, as it is usually called, we hold no brief; in fact, we have condemned this practice in these columns. Too frequently, however, physicians do not give pharmacists the credit which they deserve for standing between the unthinking public and the proprietary manufacturer when the former is inclined to swallow the "bait, hook, line, and sinker" which the latter dangles before it. While it is true there is a certain type of

drug store that encourages this sort of thing to the limit, the better type of store, representative of ethical and professional pharmacy, recognizes its duty and honestly advises the public to seek medical advice in numerous cases. This attempt, on the part of professional pharmacy, to protect and improve the public health is frequently under-estimated, perhaps, because of a lack of appreciation of the acts it encompasses.

Take the matter of first aid, for instance. It is generally recognized, we believe, that the proper function of first aid is to tide the patient over until he can receive medical attention, at the same time putting him in the best possible condition for the physician's or surgeon's attention. Certainly nobody can condemn a pharmacist for practicing first aid to this extent. The same applies to the sale of the ordinary home remedies, usually found in the medicine cupboard; or advice in the outfitting of an emergency kit. But, when a proprietary manufacturer goes so far as to advertise and put out products for anemia, liver trouble, Bright's disease, diabetes, eczema, gout, rheumatism, etc., it is high time for the professional pharmacist to give a little sound advice as to the dangers of self-medication. The numerous classes of prophylactics and antiseptics, ranging from the iodides for goitre prevention to fluids of low surface tension for mouth washes, might be elaborated upon as proper fields of endeavor for the ethical pharmacist who holds the good health of his customers above dollars and cents.

On the other hand, there is the type of medical practitioner who refuses to sanction the

open sale of the widely used and long established simple remedies which the general public has come to regard as reliable and safe for home treatment. The use of such remedies is bound to continue. If they cannot be purchased from the ethical pharmacy, then they will be obtained from one of the other numerous sources and used in whatever way the label may direct. There will be no one to stand between the disreputable manufacturer and the consumer. Obviously, both extremes call for an intermediary, so far as the public health is concerned.

At various times it has been suggested that some provision should be made for the issuance

PHARMACOPOEIAL SUPPLEMENTS AND CONFUSION

of supplements to the Pharmacopoeia during the periods between successive decennial revisions. It is claimed that the scientific progress of therapeutics is so rapid nowadays that the Pharmacopoeia is out-of-date with reference to many items before a revision can bring it abreast of the times. In this way the latest developments and research accomplishments in all the scientific fields could be made an integral part of our legal standards for the benefit of medical practice.

In the light of past developments, the efficacy of this scheme appears rather doubtful to our minds. The task of revising the Pharmacopoeia is one which involves so many cross currents of opinion, and is based upon so much experimental work in which the personal equation plays a vital role, that ten years seems a short enough period of time for a revision committee to come to definite conclusions on which it is willing to commit itself. While the revisers of our Pharmacopoeia may point with just pride, both past and present, to the work which they have accomplished, there are plenty of instances where this work has been too hasty, if one is to judge by subsequent "overhauls." Perhaps a little more of the British conservatism would do us no harm. Too many alterations, deletions, and additions, even every ten years, are confusing enough without resorting to a constant state of flux. Prejudiced interests are very likely to reap the major benefits so far as the recognition of new official preparations is concerned in supplemental additions.

Furthermore, it is to be noted that so far as the acceptance of new synthetic preparations is

concerned, the U. S. P. Revision Committee has followed, and most likely will continue, the practice of accepting those new preparations that have been already approved by the Council on Pharmacy and Chemistry of the American Medical Association. For more than a quarter of a century, this Council, composed of experts in all the fields associated with medical science, has effectively standardized the worthwhile new preparations in the periods between revisions of the Pharmacopoeia, such as acetylsalicylic acid, amidopyrine, ethyl aminobenzoate, dichloramine, and the barbitol and silver protein compounds. In many instances, new and non-official products have proved short-lived, experience not having borne out the hopes and expectations of those who fathered them, or those who investigated them. It is obvious that had they been made official by introduction into a pharmacopoeial supplement, the resultant confusion would have been most trying and exasperating to all concerned. To our way of thinking, the N. N. R. may well continue to function just as it does, by serving as a non-official auxiliary to the United States Pharmacopoeia which it is well fitted to do during the interim between revisions. Ten years is not too long to wait while accumulative experience is definitely establishing an authoritative standard work such as our Pharmacopoeia purports to be.

Many medical writers have declared that codeine is not a dangerous drug and that it is

OVERDOING THE USE OF CODEINE

not likely to lead to addiction. It has been claimed that there is scarcely an authentic case of addiction on record as a result of the use of codeine or its salts. Some authoritative writers on the subject have taken the stand that codeine lacks the vicious nature of the other narcotic chemicals used in medical practice to such an extent that it might well be taken from under the narcotic ban altogether.

In a series of a dozen or more articles running in the *Journal of the American Medical Association* on "The Indispensable Uses of Narcotics," (these will be published later in book form) some of the writers refer to the harmlessness of codeine so far as addiction is concerned, but warn against the indiscriminate use of any narcotic substance by physicians. Regardless of other considerations, indiscriminate use of narcotics, though within the pale of the law, makes the anti-narcotic regulations

for the control of illicit distribution much more difficult to enforce.

Now comes a report from the United States Public Health Service that codeine is more harmful to general health than either morphine or heroin, regardless of what it may be from the addiction viewpoint. The Public Health Service experiments were carried out on monkeys and seem to indicate that the very noticeable increased capacity for the narcotic drugs—110 milligrams of codeine caused less severe symptoms than did 10 milligrams at first—cannot be ignored. The experiments proved that gradual deterioration in general health was very pronounced.

During the last few years, pharmacists have noticed the greatly increased amounts of codeine being prescribed by physicians. Whether this practice is justifiable is not, of course, for pharmacists to determine. In view of our present knowledge, however, it appears that pharmacists should continue to give their fullest moral support to the present narcotic regulations and not, themselves, help to overdo the distribution of exempt codeine preparations.

We are thoroughly in accord with those who are seeking the adoption, by the Pharmacopoeial Revision Committee, of standard metric abbreviations. The United States Bureau of Standards, in harmony with the International Bureau of Weights and Measures, has adopted and promulgated rational and concise abbreviations, and this act, of itself, constitutes standardization beyond reasonable doubt, so far as sound basis for argument rests.

METRIC ABBREVIATIONS AND THE PHARMACOPOEIA

When the U. S. P. X adopted the cubic centimeter as its principal capacity unit for measuring fluids, it erred from the viewpoint of scientific accuracy; a statement that is substantiated by any authoritative treatise on the metric system. The cubic centimeter designates a unit differing in value from that of a thousandth part of a liter; each is a distinct unit of different derivation.

The milliliter, abbreviated "ml," and pronounced "em'-ell," lends itself readily to practical use, and, after a short period of time, it will follow just as naturally and logically as the equally "lingo-like" expression "see see" has followed "cc."

The Revision Committee might well consider other metric abbreviations now used in the Pharmacopoeia which deviate from those sanctioned by government bureaus of standards in this country and abroad. Uniformity of practice will do much to hasten universal adoption of the metric system, so urgently needed to clear up our antiquated hodge-podge system of weights and measures. World-wide use of the metric system for all purposes is rapidly approaching; its nomenclature should be uniform.

WHAT ABOUT CANCER?

(Abstracted from *Time*, Vol. XVII)

Cancer may be likened to the frog of the fable who wanted to grow as big as an ox, finally inflating itself too greatly and bursting. So cancer is the unrestrained growth of cells, which may become enlarged to the point of bursting, and may grow in any part of the body. No one knows definitely what starts the vigorous growth of these cells, but they enlarge to such an extent that they choke out and kill the remaining normal cells. Oftentimes cells of active cancer may drift away from the primary growth, eat into the lymph and blood vessels, and locate in some secluded, hospitable spot in any part of the body, be it flesh or bone. It has been shown that one out of every eight women and one out of every twelve men develop cancer, generally attacking women in the uterus or breasts and men in the stomach.

Just what is being done in order to find a cause and cure for this dreaded ogre is not generally known. There are hundreds of eminent physicians working on cancer. In the United States is the American Society for the Control of Cancer; the League of Nations has a Cancer Health Commission; Great Britain has a Cancer Committee of its Ministry of Health; France, Austria, the Netherlands, and Switzerland have similar organized bodies for the purpose of promoting research. At the present, treatment lies mainly in cauterizing surgery, X-ray, and use of radium. Recently, a Philadelphia surgeon perfected a clean-burning needle and such electric cautery reaches places that the scalpel cannot.

It is the duty of every American citizen to stand back of any weapon that may be organized to battle this dreaded ogre which ranks third in death-causing ailments, and for which no cause or cure has yet been found.





Official Title: Wanda Jeannette Baygrowitz

Common Name: Wanda

Habitat: Cleveland, Ohio.

Physical Properties: Wanda's formula for winning admiration is her friendly interest in her fellow students' successes, and her interest in the school activities. Her beauty is not a formula; it's a gift!

Assay: Ph. C., B. S.

Tests for Identity: Kappa Epsilon; Rho Chi; Student Council 4.

Official Title: Edmund Alexander Celke

Common Name: Al

Habitat: Cleveland Ohio.

Physical Properties: Alex is the story-book boy—the amazing athlete, the long-sighted leader, the firm friend, and the scintillating student. What attainments! What a personality! What a man!

Assay: B. S.

Tests for Identity: Kappa Psi; Rho Chi; Pharmacy Basketball 1, 2, 3; Intramural Bowling 3, 4; Class President 3; Student Council 3; Pharmacon 3.

Official Title: Rufus Oliver Farris

Common Name: Bunk

Habitat: Cleveland, Ohio.

Physical Properties: Who is the most popular man in Pharmacy School? And why is he? Individuality is the answer,—so evident in his every movement, his speech, his humor, and even in his gait.

Assay: B. S.

Tests for Identity: Rho Chi; Student Council 4; Pharmacy Basketball 3, 4; Athletic Manager 4; Intramural Bowling 3, 4; Pharmacon Reportorial 4.

Official Title: Robert Alexander Fitch

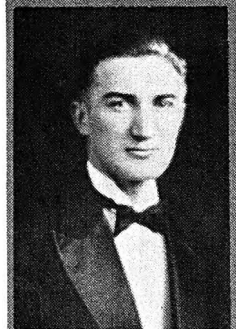
Common Name: Bob

Habitat: Cleveland, Ohio.

Physical Properties: Don't wish Bob luck—his industriousness guarantees success. His list of activities—not the accomplishments of several, but of one man!—does not mention his capacity as the most steadfast and understanding friend.

Assay: B. S.

Tests for Identity: Kappa Psi; Rho Chi; Class President 2, 4; Class Vice-President 1; Pharmacy Basketball 1, 2, 3; Pharmacon Editor 4; Associate Editor 3; Student Council 2, 4; Intramural Bowling 4; Sophomore, Junior, and Senior Scholarships.





Official Title: Ruth Lucille Kotershall

Common Name: Ruthie

Habitat: Cleveland, Ohio.

Physical Properties: The pen becomes powerless when it attempts to describe the magnetism of Ruth's personality, the attractiveness of her smile, the cheerfulness of her disposition. Perhaps her best description is—a real pal.

Assay: Ph. C., B. S.

Tests for Identity: Kappa Epsilon; Rho Chi; Class Treasurer 1; Pharmacon Reportorial 4; Student Council Secretary 4.



Official Title: Harry Frederic Valway

Common Name: Doc

Habitat: Cleveland, Ohio.

Physical Properties: Every class has one. Harry is the "daddy" of the class. Just as might be expected, we sought his advice, his help and leadership which his experience warranted, and which his generous nature never refused.

Assay: B. S.

Tests of Identity: Kappa Psi; Rho Chi; Pharmacy Basketball 1, 2, 3; Pharmacy Bowling 3, 4; Student Council President 3; Pharmacon Business Manager 2, 3; Associate Editor 2.



Official Title: Jerome Adelstein

Common Name: Ipomoea

Habitat: Cleveland, Ohio.

Physical Properties: Harkening to the maxim, "A sound mind in a sound body," Jerome takes his education and his athletic endeavors equally seriously. With his natural faculty of cheerfulness and wit, he embodies the perfect combination.

Assay: Ph. C.

Tests for Identity: Pharmacon Reportorial 2, 3, 4; Intramural Baseball 2.



Official Title: Wills Hathaway Clinton

Common Name: Reverend

Habitat: Euclid, Ohio.

Physical Properties: We watched Will work industriously at his studies, work willingly for his school and companions, winning the friendship of all. Now we will be proud and happy to watch him wear his black toga.

Assay: Ph. C.

Tests of Identity: Business Manager Pharmacon 1; Pharmacon Reportorial 3, 4; Red Cat 2; Pharmacy Basketball 2.



Official Title: Joseph Charles Eisenberg

Common Name: Joe

Habitat: Cleveland, Ohio.

Physical Properties: Jim Corbett was the first champion to be the perfect gentleman, and Joe carries on. His faultless attire, his winning ways, both in the ring and in personality, are familiar to the entire University.

Assay: Ph. C.

Tests for Identity: Alpha Zeta Omega; Class Treasurer 2; Pharmacon Reportorial 2, 3; Boxing 2; Lightweight Champion 3, 4.



Official Title: George Henry Gerlach

Common Name: Sassafras

Habitat: Cleveland, Ohio.

Physical Properties: There must be a great pleasure in having successfully completed a course of study, in cementing friendships and in faithfully performing the duties chosen for one. George must certainly experience this delightful sensation.

Assay: Ph. C.

Tests for Identity: Rho Chi; Student Council Vice-President 3; Pharmacon 2, 3; Nihon 3.



Official Title: Clara Gertrude Goldberg.

Common Name: Clara

Habitat: Cleveland, Ohio.

Physical Properties: Girls have ever been teased unmercifully by the stronger sex, and Clara has experienced plenty of this. But her ready rejoinders and sharp tongue have merely cloaked the kindness and gentleness of her sunny nature.

Assay: Ph. C.



Official Title: Lister Frederick Graf

Common Name: Graf

Habitat: Perrysville, Ohio.

Physical Properties: Lister is one of our prides, for he is of the select few of Pharmacy School that have gained University prominence in athletics. May he star in life as he did on the baseball diamond.

Assay: Ph. C.

Tests for Identity: Sigma Nu; University Baseball 2, 3; Hudson Relay 1, 2.



Official Title: Bertha Henrietta Grosser

Common Name: Bertha

Habitat: South Euclid, Ohio.

Physical Properties: Anyone who welcomes positions of minor prominence, and yet, positions abounding in unnoticed labor, deserves the unlimited admiration of all. We salute thee, Bertha!

Assay: Ph. C.

Tests for Identity: Kappa Epsilon; Pharmacon, Assistant Circulation Manager 1, Circulation Manager 2, 3; Class Secretary 2; Class Treasurer 3.



Official Title: Marie Agnes Hoefer

Common Name: Marie

Habitat: Cleveland, Ohio

Physical Properties: Reticence is her chief trait; and so if one addressed her, her friendliness and willingness to chat seemed surprising. The ideal woman could well be described thusly.

Assay: Ph. C.

Tests for Identity: Kappa Epsilon.



Official Title: Donald Leigh Kaufhold

Common Name: Don

Habitat: Akron, Ohio.

Physical Properties: Don's stature is prepos-ing; yet the line of comparisons ascends rapidly as we consider next his athletic prowess, then his persistency, and finally his great-heartedness.

Assay: A. B., Ph. C.

Tests for Identity: Kappa Psi; Rho Chi; Basketball 2; Pharmacy Bowling 3.



Official Title: Elizabeth C. Koci

Common Name: Betty

Habitat: Cleveland, Ohio.

Physical Properties: As the only "Mrs." in the class, Betty upholds her honorable position by means of serious study, quiet dignity, and a friendly desire to help.

Assay: Ph. C.

Tests for Identity: Kappa Epsilon.



Official Title: Robert Arthur Kumpf

Common Name: Bob

Habitat: Canton, Ohio.

Physical Properties: There is great value in being sociable, being an untiring worker, and a good student. Gold is a trinket as compared to friendships. Therefore, in these respects, Bob has amassed great wealth.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi; Pharmacon Reportorial 1, 2, 3.



Official Title: Michael Anthony Lauria

Common Name: Mike

Habitat: Cleveland, Ohio.

Physical Properties: Mike is slow to speak, but when he does, it is what he thinks and worth listening to. But not at all slow is his graceful figure at the bowling alley or on the basketball court.

Assay: Ph. C.

Tests for Identity: Kappa Psi; Class Vice-President 2; Student Council 3; Intramural Bowling 2, 3; Pharmacy Basketball 2, 3.



Official Title: Kenneth N. Lautenschlager

Common Name: Kenny

Habitat: Akron, Ohio.

Physical Properties: Ken likes to help others, to mix in the crowd, to make everyone a pal. He does not realize that he need not seek friends,—such as he cannot help but draw others to him.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi; Class Vice-President 1; Student Council 2; Intramural Baseball 2.



Official Title: Max Ben Lessowitz

Common Name: Max

Habitat: Cleveland, Ohio.

Physical Properties: Max has studied hard during his sojourn at Pharmacy School, and now that the day of rewards has come, there remains no doubt in any of our minds but that Max will reap a goodly share.

Assay: Ph. C.

Tests for Identity: Alpha Zeta Omega; Class Vice-President 3.



Official Title: Russell Bailey McArtor

Common Name: Mac

Habitat: Salem, Ohio.

Physical Properties: Mac put sports to one side in order to concentrate on thoroughly absorbing his professional learning and becoming a leader of men. As a result, he is first in scholarly excellence, and first in class offices.

Assay: Ph. C.

Tests for Identity: Kappa Psi; Rho Chi; Sophomore and Junior Scholarships; Class President 3; Student Council President 3; Associate Pharmacon Editor 3; Reporter 1, 2.



Official Title: Oscar Padwa

Common Name: Emanuel Imhoff

Habitat: Cleveland, Ohio.

Physical Properties: Padwa's smiling countenance failed even to lose its radiance when he all but dove into the Imhoff tank. Have we ever seen Oscar in any but a happy mood?

Assay: Ph. C.

Tests for Identity: Alpha Zeta Omega



Official Title: Nelson Karl Rauschkolb

Common Name: Rauschbaum

Habitat: Cleveland, Ohio.

Physical Properties: We stand in fear of but one thing hindering Eddie's success. Patients seeing such a jolly pharmacist smiling at them across the prescription counter will feel so much better they are liable to think they don't need medicine. We hope he doesn't take this seriously, for we wouldn't have Eddie change his disposition for the world!

Assay: Ph. C.

Tests for Identity: Phi Delta Chi.



Official Title: Nelson Schroeder

Common Name: Nels

Habitat: Cleveland, Ohio.

Physical Properties: Learning may be acquired; such has Nelson done, and done well. But personality and the ability to make friends are inborn. With these he has been handsomely endowed.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi; Basketball 1, 2, 3.



Official Title: Laddie L. Sedely

Common Name: Lad

Habitat: Cleveland, Ohio.

Physical Properties: Doesn't the name "Laddie" suggest a likeable lad?—somehow suggest cheer, good nature? It is the perfect symbol for this young man who seems to have molded his character to fit his name.

Assay: Ph. C.

Tests for Identity: Phi Delta Chi.

Official Title: George William Suntala

Common Name: Satsuma

Habitat: Cleveland, Ohio.

Physical Properties: Remember the saying, "Let George do it?" Well, George has done it—successfully mastering the art of Pharmacy and creating many friendships, both treasures in themselves. And may George keep right on with the good work.

Assay: Ph. C.

Tests for Identity: Kappa Psi.

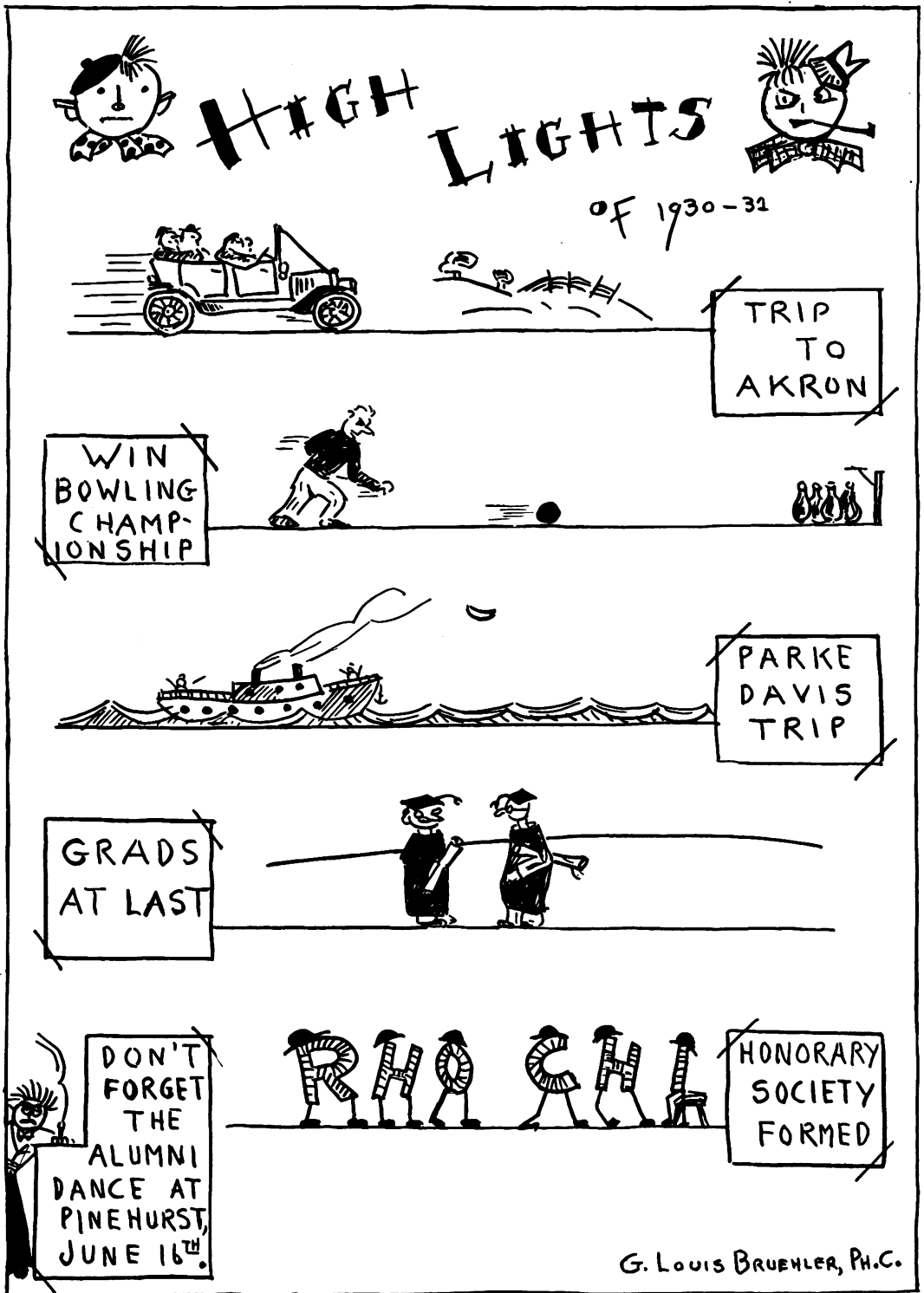
Official Title: Irene Marie Boris

Common Name: Irene

Habitat: Johnstown, Pa.

Physical Properties: Too retiring to ever be in the foreground, Irene has quietly but surely attained her goal. Just as quietly and surely she will go through life with a wistful smile and a brave heart.

Assay: B. S.



About the Fraternities

ALPHA ZETA OMEGA NEWS

The annual formal dinner-dance of the Alpha Zeta Omega Fraternity was held at Guild Hall in the Builder's Exchange Building on Friday evening, May 15. We were honored by the presence of Dean and Mrs. Spease, Dr. and Mrs. Bacon, and Mr. and Mrs. Edwards as guests. The dance was also attended by two fraters from Detroit, Harold Ellias, directorum of the chapter, and Sam Rappaport, ex-directorum.

Dinner was served at 8:30 o'clock. During the first few courses, we were entertained by six dancing acts furnished by the Leona Hart School of Stage Training. The entertainment proved supreme and was heartily enjoyed by the faculty and all present. The dancers who furnished the entertainment, Kathleen Long, Dotty Barlow, The Hahn Sisters, Jeraldine Hafey, and Alice Jane Smith, showed some of the good talent exhibited by the Leona Hart School.

Immediately after dinner, the dance was started and the fun began. Songs were rendered by Hy Gerson and Sam Lester, and then followed a little tap dance by Sam Cohen, and a short skit by Sam Cohen and Joe Eisenberg. Frater Roy Scott acted as "King Fish," the Dean's title for the toastmaster. The committee consisted of Joe Eisenberg, chairman, Roy Scott, Joe Dworkin, Hy Gerson, and Max Weinberg.

We regret that we have not sooner spread the news that Frater Gressell and his wife are the proud parents of a son.

Housemaids must surely have been busy on May 15 caring for children while Fraters Baskind, Matyas, and Gressell were enjoying the dance.

Joe Eisenberg is thankful to Dean Spease for inviting his girl friend to Cleveland to attend the Alumni Banquet with him.

Sammy Cohen is still as thin and lively as ever. Ask those who attended the dance to tell you how he hopped around.

Since this is the last issue of the PHARMACON for the year, the graduating members of Alpha Zeta Omega Fraternity bid the school farewell until the end of summer. Drop around the cottage sometime and say hello! We will be located at stop 136½ and Lake Shore Boulevard.

PHI DELTA CHI FRATERNITY NEWS

By Robert A. Kumpf

It gives me great pleasure to sit down to write, and think that this is the last time that I will be author of this column, after having served time for over two years. I will not say, however, that I regret that I have been doing this job so long, even if the readers of this chapter news are glad that a new author will finally take my place. I hope that my successor will reap as much benefit and obtain as much pleasure from this reportorial job as I have.

The past year has been filled with many trials and tribulations for most of us, but I think that I am safe in saying that the joy of these past two semesters has dominated, even if things in general have been a little more difficult than they were during previous years. Though the current has been strong, I'll wager that the majority of our graduating men wish they were coming back to the grind, when they think that maybe they are leaving only to increase the population of the great army of the unemployed.

Now I will get a little more serious and write about who will be at the head of our business and social activities for the ensuing semester. Our semi-annual election of officers was held on May 7, when an election committee composed of Brothers Kumpf, Bennett, and Gerber submitted a list of officers to the chapter which accepted and installed the new chiefs. They are: Edwin W. Miller, president; Charles R. Bennett, vice-president; George H. Bruehler, treasurer; Arville D. Hagey, secretary.

These are all very fine men and should be very successful. Brother Kenneth Lautenschlager is the retiring president and is to be commended for his fine work during the past semester.

Our local chapter organ has been in the background for several months, but it will reappear about June 15. We are very proud of our *Alfalfa*, which has been published for several years. Brother Bruehler is the present editor with Brother Bennett assisting.

Alpha Alpha held its annual spring party as a dinner-dance on the evening of May 16th. Dinner was served in a private dining hall at

the Green Gables Inn at nine o'clock. The table was arranged in a large square and was most uniquely decorated with corsages for the ladies, the flowers of which were in keeping with the fraternity colors, old gold and dregs of wine. After the banquet, the party moved to the ball room and danced until twelve-thirty to the syncopating strains of the Green Gables Orchestra. Brother and Mrs. Spease, Brother and Mrs. Davy, and Dr. and Mrs. Lankelma were guests at the party. The affair was in the hands of a committee composed of Brother Schroeder, chairman, Brother Sedely, and Brother Rauschkolb. These men are to be highly praised for the fine arrangements which resulted in the most successful party we have had in the recent past.

We have recently had a letter from Brother Baldinger. Larry will receive his Master of Science degree in June, at Notre Dame, and will continue his studies for a few more years in pursuit of a Ph.D. Brother and Mrs. Baldinger and son will spend the summer in Cleveland.

KAPPA PSI NEWS

Graduation cut rather deeply into the ranks of the active chapter this year, seven men being among those who received their sheepskins at the June commencement. Those remaining to carry on the good work of Kappa Psi wish the following men good luck and heartiest wishes for success in the world: Alex Celke, Robert A. Fitch, Harry Valway, Donald Kaufhold, Russell McArtor, Michael Lauria, and George Suntala. The first three received their Bachelor of Science degree, and the remaining men were granted that of Pharmaceutical Chemist. It is with regret that the graduates have their names listed among the alumni, and they join in returning the compliments of the active chapter.

Saturday, May 9, 1931 found the brothers gathered at the Hollenden Showboat for Beta Beta's annual dinner-dance. The party was a formal this year and turned out to be a very happy and pretty occasion. Dinner was served shortly after seven, and, the floor having been cleared of tables, dancing progressed until one in the morning to the tunes of Louis Toth and his orchestra.

About fifty persons enjoyed the affair. Those present from the faculty included

Dean and Mrs. Edward Spease, and Mr. and Mrs. Edward S. Davy and Mr. and Mrs. Leroy D. Edwards, who served as chaperones. Brother Jack Meresicky proved a genius in the role of toast-master, his wit and humor keeping all present in the best of spirits. Jack hinted that it was his initial attempt at the art, but the brothers refuse to be fooled. Anyone who put on the act as well as he certainly had past practice. Dean Spease offered a few words during dinner, and he was followed by Regent Schweickardt, Brother Scribner, and Brother Celke, speaking respectively for the actives, alumni, and this year's graduates. All present had a very enjoyable evening, and much thanks is due the Entertainment Committee, composed of Brothers Celke, Meresicky, and Webb, for the arrangements made and the manner in which everything connected with the affair was managed. In addition, the Chapter extends its thanks to those who were unable to attend the dance, but who still were kind enough to lend their support to its success.

"Extra! Extra! Kappa Psi House burns to ground!" Hold your seats, though, for there's no reason to get over-excited. But this might have been the song on newsboys' lips had not Brother Schweickardt been present Tuesday, May 14th. Karl happened to be in the back yard and noticed smoke coming from the house. Realizing immediately that none of the brothers smoke cigars capable of emitting such volumes of smoke, he called fire departments and started rescuing the belongings of brothers who were pursuing their studies at Pharmacy School. The fire, of unknown origin, was confined to the third floor, but was licking its way rapidly up the rafters when firemen arrived to halt its progress. More damage resulted from water than fire and the house was quite a mess when the last of the fire-fighters had withdrawn. The combined efforts of the actives and pledges soon had the place in shape again and the regular meeting was held that night in spite of the misfortune. We will dispense with bestowing honors on any heroes of the mishap, but we must congratulate Karl on the fact that he succeeded in getting three or four departments on the scene.

It was doubted at first if those living in the house could sleep comfortably there that night due to the strong odor of smoke.

Members of Phi Delta Chi Fraternity offered to provide sleeping quarters at their house, and the brothers of Kappa Psi take this opportunity to thank their schoolmates for their kind offer. That's what we call real co-operation, and Kappa Psi appreciates it and stands ready to repay this kindness should the occasion ever arise.

Brother and Mrs. Ralph Cullinan recently moved to Akron, where Ralph has been transferred to the offices of the McKesson-Hall Van Gorder Co.

Three of the brothers participated in the initial Medical Aptitude examination recently given by the American Medical Association. We congratulate Brothers Celke, Kaufhold, and Valway on rating among the upper half in this test.

Just how quickly the Building Committee can assemble and function was demonstrated by the fire, for, six hours after it occurred, we had present with us Brothers Hickernell, Geuss, and Jewel, already working on plans for reconstruction.

Brother Les Hunt is manager of Marshall's Broadway-55th Street store at the present time.

Talk about "air-mindedness!" We're getting it! Brothers Suntala and Fitch, and Pledge Bellan recently took to wings when Pharmacy School visited the Miller Rubber Co. and Akron Airport. How did the boys like it? Only one objection—the trip was fine while it lasted, but not half long enough. In fact, George tried to talk the pilot into flying him back to Cleveland. What do you want for \$2.50, George?

Brothers Karl Driggs and Lawrence Jordan recently partook of one of those good meals at the house as prepared by our able cook, Mrs. Davis.

From Greenville, Pa. we learn that Pledge Barney Perifano, in addition to being one of the leading druggists in the community, is managing the Greenville Merchants baseball team—generally known as the "Greenville Wonders." Is that correct, Barney? With all the hard luck that the Cleveland Baseball Club has been experiencing lately, perhaps Barney could give Roger a few hints on how to make a winning team out of a losing one. May we feel free to call upon Barney in case any threats arise to put Cleveland in the Three-I League.

Brother Joe Koci, formerly of the Progress Drug Co., now manages his own store,

the Guardian Drug Co., at 4803 Turney Road.

Fate gave Brother Bill Willoughby a rather raw deal recently when his store, the Beach Cliff Pharmacy, 20111 Lake Rd., was destroyed by fire. You have our feelings, Bill.

With extreme great pleasure we announce that Brother James S. Neely has been granted his Master of Arts degree in chemistry. Jim has worked diligently and steadfastly toward this goal, and the brothers en masse extend their most hearty congratulations and good wishes.

With the idea in mind of getting the actives and alumni together during the summer, the Chapter plans a smoker for the night of Thursday, August 6, 1931. We believe this should give all members sufficient time to make suitable arrangements so they may attend this affair. So come on, you Beta Betans, and get into the swing of things.

And now Beta Beta puts up its pen for the year, wishing all the members of the faculty and student body a very pleasant vacation. We'll be seein' you in the fall.

THANK YOU

In response to a request in the April PHARMACON for two previous issues, namely, April 1927 and January 1929, we are pleased to announce that Sister M. Adelaide, St. Joseph's Hospital, Lorain, and Mr. L. E. Warren of the United States Department of Agriculture, Washington, D. C., were kind enough to supply us with these numbers. The PHARMACON extends its thanks to both of these persons.

Oversold

"Fellow citizens," said the candidate, "I have fought against the Indians, I have often had no bed but the battlefield and no canopy but the sky. I have marched over the frozen ground till every step has been marked with blood."

His story told well, till a dried-up looking voter came to the front.

"I'll be darned if you hain't done enough for your country. Go home and rest. I'll vote for the other fellow."

COCA COLA

Caffeine is admittedly the active drug in Coca Cola. In 1909, the United States government chemists analyzed Coca Cola and reported, in effect, that it contained caffeine, phosphoric acid, sugar, alcohol, caramel, glycerin, lime juice, essential oils, and plant extractives. In the manufacture of Coca Cola, it seems that decocainized leaves are used, possibly so that the makers may have some excuse for the use of the phrase "Coca" in the name of the product. The Coca Cola makers themselves have admitted and advertised the fact that their product contains caffeine. They have published analyses showing that in 1909 the caffeine present in one ounce of Coca Cola syrup was about $1\frac{1}{4}$ grains.

In October, 1925, the laboratory of the Department of Health of the State of Louisiana analyzed Coca Cola syrup and reported that it contained 73.06 per cent total sugars, of which 19.98 per cent was sucrose and 53.08 per cent reducing sugars. They also reported that

there were phosphoric and citric acids present with a total acidity (as citric) of 0.64 Gm. per hundred cubic centimeters. They reported, further, finding 0.13 Gm. of caffeine per hundred cubic centimeters. There were also found certain vegetable extractives and essential oil flavoring, with caramel for the coloring. No cocaine, saccharine, or preservatives were found. About the same time, the chemical laboratory of the American Medical Association also tested Coca Cola for the presence and quantity of caffeine. They reported that Coca Cola syrup contained the equivalent of about $\frac{1}{2}$ grain of caffeine to the fluid ounce.

The medical profession has for years taken the attitude that the presence of caffeine, in the enticing form of a soft drink, is objectionable, especially so when children are using this product freely. Unfortunately, the average parent offers no objection to his children's using Coca Cola, because he does not realize that it contains caffeine.

—From *HYGEIA*, February 1931.

Compliments of THE ALUMNI ASSOCIATION

100% Membership Represented

by

Present Graduating Class

ALUMNI BANQUET
Pine Ridge Country Club
TUESDAY, JUNE 16th, 1931
At 6:30 P. M.

KAPPA PSI**Beta Beta Chapter**

Founded at Medical College of Virginia, School of Pharmacy in 1879

78 Chapters

Established at Reserve in 1910

Fratres in Facultate

Neil T. Chamberlin	Herman P. Lankelma
Franklin J. Bacon	Leroy D. Edwards
Robert P. G. Stockhaus	Robert M. Porter
Paul R. Hudson	Earl E. Hester

Fratres in Collegio**Nineteen Thirty-one**

E. Alexander Celke	Michael A. Lauria
Robert A. Fitch	Russell B. McArtor
Donald L. Kaufhold	George W. Suntala
Harry F. Valway	

Nineteen Thirty-two

John C. Meresicky	Karl W. Schweickardt
John A. Obester	Winton A. Webb

Nineteen Thirty-three

Ray R. Stemple	Stephen W. Sabo
----------------	-----------------

Pledges

John Bellan	Ivan Kordich
Theodore E. Gutkowski	Charles Pilot
Harry J. Henderson	John Morse

PHI DELTA CHI

Alpha Alpha Chapter

Founded at University of Michigan in 1883

31 Chapters

Established at Reserve in 1923

Fratres in Facultate

Edward Spease

Edward S. Davy

Russell T. Stimson

Fratres in Collegio

Nineteen Thirty-one

Robert A. Kumpf

Nelson K. Rauschkolb

Kennith Lautenschlager

Nelson Schroeder

Laddie L. Sedely

Nineteen Thirty-two

Allen M. Armstrong

Charles R. Bennett

George H. Bruehler

Edwin W. Miller

Nineteen Thirty-three

Kenneth C. Gerber

Arville D. Hagey

Pledges

Gerald Nelson

Clarence Pierstorf



KAPPA EPSILON

Eta Chapter

Founded at University of Minnesota in 1921

9 Chapters

Established at Reserve in 1928

Honorary Members

Alice K. Spease (Mrs. E.)

Adelaide E. Harris (Mrs. R. J.)

Cecelia Kranaskas

Sorors in Collegio

Nineteen Thirty-one

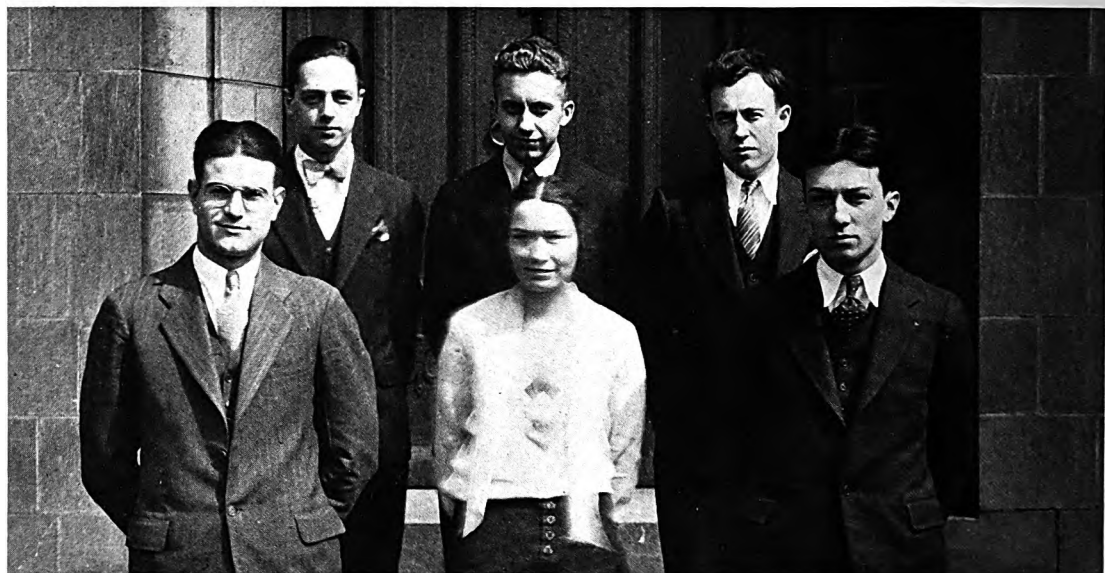
Wanda J. Baygrowitz

Marie A. Hoefler

Ruth L. Kotershall

Bertha H. Grosser

Elizabeth C. Koci



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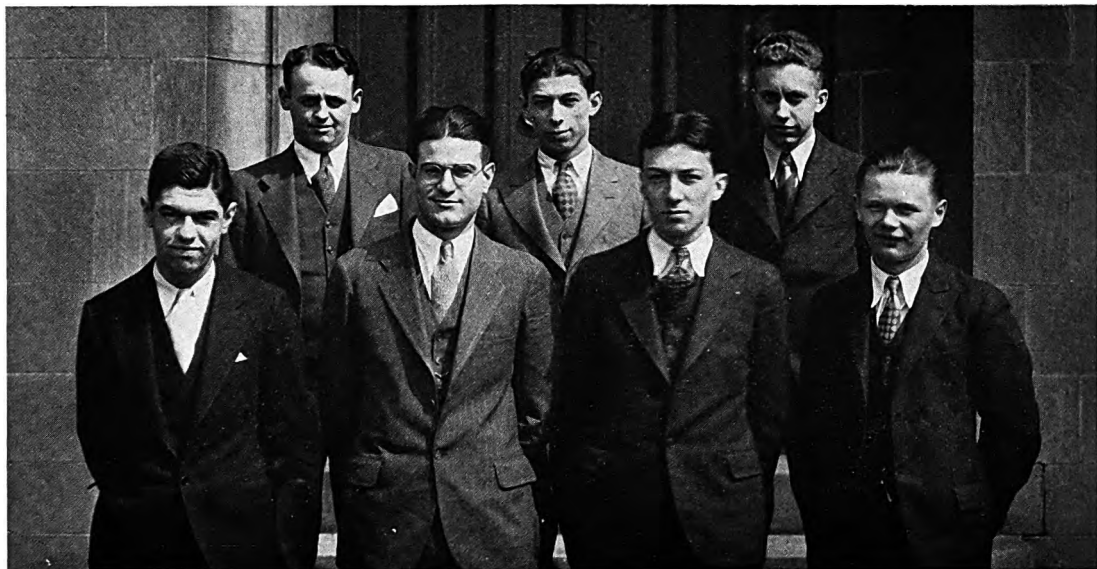
Robert A. Kumpf

Ruth L. Kotershall

Business

E. Alexander Celke

Bertha H. Grosser



STUDENT COUNCIL

(Nineteen Thirty-one)

Russell B. McArtor—President

Ruth L. Kotershall—Secretary

George H. Gerlach—Vice-president

Michael A. Lauria—Treasurer

Wanda J. Baygrowitz

Robert A. Fitch

Rufus O. Farris

(Nineteen Thirty-two)

Winton A. Webb

Saul L. Eisenberg

(Nineteen Thirty-three)

Theodore E. Gutkowski



SOPHOMORE CLASS

Charles R. Bennett
Francis Bihn
Irwin Borover
George H. Bruehler, Jr.
Aaron M. Cohen
Seymour R. Cohen
Wilbur J. Darr
Victor DeOreo
Julius Y. Duber
Saul L. Eisenberg
David M. Goldberg
Edward W. Hemmeter
Abe Hirsch

Samuel H. Hruska
George Jacobs
Ivan S. Kordich
Frank J. Mader
Edwin W. Miller
Julius Miller
John A. Obester
Jerome S. Ratner
Weldon R. Rehburg
Helen C. Rell
Winton A. Webb
Albert L. Wells
Ladimer Younger



FRESHMEN '34

With fear in our eyes and hearts, and before the characteristic freshman greenness had worn off, the sophomores, along with the rest of the School, gave us a thorough initiation—one that will linger long in the minds of those who participated. We were recipients of automobile rides where the bold became meek, swims in Wade Park pool, and various drugs which permeated our inner anatomy. As usual, we were given "frosh caps" for a handsome fee and the "Sophs" showed battle as regards to the wearing of these ornaments, but few casualties resulted.

A few of the less fortunate disappeared from our ranks during the year; so now we

have the harvest of the best. When it came to athletics, Bellan, Stemple, Gerber, Dunner, and Gismondi were right there with the Pharmacy School basketball and baseball teams and everyone of them proved to be of real value. All will be in uniform when the season starts next year.

The Class of '34 has the qualities of cheerful fun and serious application in happy combination which speaks uncommonly well for the future of these embryo pharmacists. It may be truthfully stated that in all other respects the class as a whole enjoys a commendable rating and shows every indication of finishing the year well in advance of any similar case.

Class Officers

Theodore E. Gutkowski—President
 Philip Dunner—Vice-president
 William Kutler—Secretary
 Sam Leiner—Treasurer

EXPRESSED OIL

"I don't mind washing the dishes for you," wailed the hen-pecked husband. "I don't object to sweeping, dusting, or mopping the floors. But I ain't gonna run no ribbons through my nightgown just to fool the baby."

Success Expert: "What's you name?"

Greek Client: "Gus Poppopopulos."

Success Expert: "Get a job selling motor-cycles."

Mother (introducing daughter)—"My daughter, May."

Father (introducing son)—"My son, Will."

An Irish woman walked into a large department store. The floorwalker, who was very bowlegged, asked what he could do for her. She told him she would like to look at the dresses that were on sale.

"Just walk this way, madam," said the floorwalker.

The woman looked at his legs.

"No, sir," she replied indignantly, "I'll die first."

Bob: Why do you call that girl "Bunsen?"

Ken: Oh, she's just an old flame of mine.

"Well, I think I'll put the motion before the house," said the chorus girl as she danced out on the stage.

A woman went into a chemist's shop and said: "Have you any Life Buoy?"

The assistant, a young American, replied: "Set the pace, lady."

Willie: What is a peace offering, dad?

Father: Oh, anything from a box of chocolates to a fur coat.

The editor of a city poultry journal received a letter from a woman reader. It read: "How long should a hen remain on the eggs?"

The editor replied: "Three weeks for chickens and four weeks for ducks."

Three weeks passed and the editor again received a letter from the reader: "Thanks so much for the kind advice. The hen remained on the eggs for three weeks and there were no chickens hatched. As I did not care for ducks, I took her off the nest and sold the eggs."

Superintendent of Insane Asylum: Did you get those five men who escaped?

Guard: Five? We got thirteen!

Train Conductor—How old is that boy?

Father—Four years old.

Train Conductor—He looks to be eight.

Father—Well, can I help it, if he worries all the time?

The brakes had failed! Women screamed; strong men turned pale! With rapidly increasing speed, the bus ran backward downhill! But never once did the driver lose his presence of mind.

"Quick, Bill," he yelled to his conductor, "change the destination boards!"

"I never knew until I got a car that profanity was so prevalent," said the minister.

"Do you hear much of it on the road?"

"Why, nearly everybody I bump into swears dreadfully."

Motor cop (producing note-book): What is your name?

Speeder: Aloysius Alistair Cholmondeley Coypean.

Cop (putting book away): Well, don't let me catch you again.

Edmund: "I'm going to buy myself a harem.

Oliver: What do you mean? You can't buy a harem, can you?

Edmund: Sure, I just saw a sign at a gas station that said, "Six gals for one dollar."
—*Purdue Pharmacist.*

A stuffed olive is only a pickle with a tail light.

"Parade Rest"

Pat and Mike were watching a Shriners' parade.

"Who are they, Mike?"

"Those are Shriners."

"What are they?"

"They're Masons, you poor fish."

"What the H— do they want now? They're getting \$13.00 a day, ain't they?"

Dean—When do the leaves begin to turn?
Yearling—The night before the exam.

Professor: "I forgot my umbrella this morning, dear."

Wife: "How did you remember that you had forgotten it?"

Professor: "Well, I missed it when I raised my hand to close it after the rain stopped."

A patient who complained of digestive troubles was told by a specialist that he was drinking too much and would have to quit.

"Yes, but what am I to tell the wife?"

The doctor thought for a few moments and then said, "Tell her you are suffering from syncope. That will satisfy her."

The patient did as he was told.

"What is syncope?" asked his better half.

"I don't know. But that is what he said."

When the husband had gone out the wife looked up the word in the dictionary and found that it meant "irregular movement from bar to bar."

And How!

"Gosh, you're dumb. Why don't you get an encyclopaedia?"

"Well, I have thought about it, but I'm just afraid that the pedals would hurt my feet."

Lecturer (taking his hat in his hand): "I'm going to let this hat represent Mars. Now are there any questions?"

Voice from rear: "Is Mars inhabited?"

A private was standing in the company street, outside his tent, shaving.

"Do you always shave outside?" asked the sergeant.

"Of course," replied the private. "What do you think I am—fur-lined?"

A la Wolfert

"I'm poisoned!" he cried, and fell into a stupor. Heck, someone was always leaving lids off the stupors.

—*Exponent.*

Dentist: Will you have gas?

Farmer: Gas? We don't know much about gas down our way. I think you'd better give me coal oil.

Doctor—"Deep breathing, you understand, destroys microbes."

Patient—"But, doctor, how can I force them to breathe deeply?"


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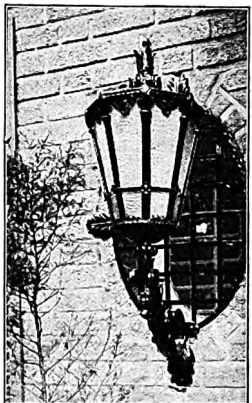
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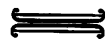
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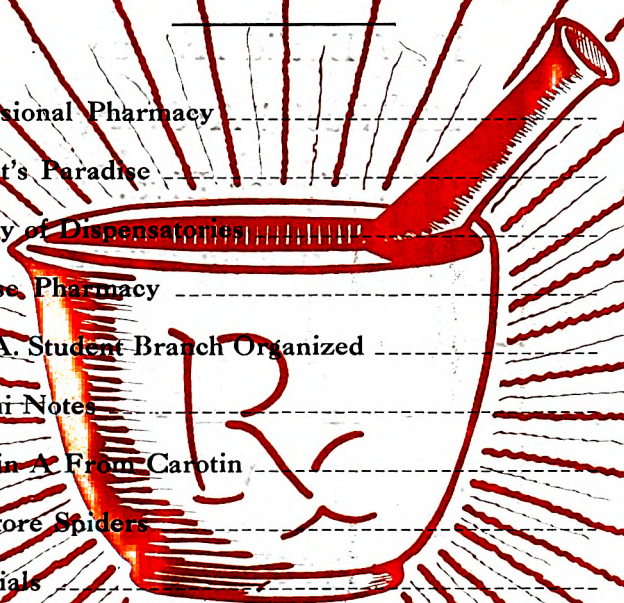
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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Professional Pharmacy

By Dean Edward Spease

The Bulletin of the Cleveland Academy of Medicine for July carried the first announcement of the plans of The Northern Ohio Branch of the American Pharmaceutical Association, and we were pleased to see that it made enough of an impression to be copied into the September issue of the Ohio State Medical Journal.

Inasmuch as the article which was published follows, we can add little at this time other than to announce that the Student Branch has likewise been organized in order that it may have an early part in this forward movement.

The Policy Committee of the Branch has formulated a series of three bulletins which are to be sent at once to the medical profession and will be followed by regular bulletins monthly.

The mailing list to physicians will consist of about 1,500 names, and it is hoped that we shall receive applications for membership from all those pharmacists who are really interested in prescription filling.

The names of the members of the Branch will be forwarded to the physicians soon so that they will know what stores have satisfied our inspectors and stand ready to co-operate with them in this movement aimed to be the real service of pharmacy to public health. The article follows:

"Physicians and pharmacists have been the sole critics of the drug store until during very recent years, and now the public has begun to criticize. When the public criticizes there is usually a reason, and, though public opinion may be wrong, it is seldom entirely wrong. There is a grain of truth somewhere to be found, and the case of the drug store is no exception.

"Out of the chaotic condition, in which pharmacy has found itself, has begun to rise, and rapidly, too, a pharmacy actually

corresponding to the ideals which it had set for itself but had not lived up to.

"The writer feels that this evolution of the drug business was a perfectly natural one, and that the racket-store type of drug store has actually brought about a division between real pharmacies and others.

"Medicine as practiced has been largely empirical. Could pharmacy be different? Today, scientific medicine is being practiced more and more and pharmacy is only beginning to be scientific. We are now educating pharmacists so that they may be of real service to the physician. Some men who have been in pharmacy for many long years are delighted today to grasp the opportunity offered to practice their profession and the young men are just taking professional pharmacy as a matter of course.

"Pharmacists and physicians have been quite critical of one another. One reason for this is that pharmaceutical education has not kept pace with medical education, yet advancement in medical education had to come first, and now one ground for lack of understanding is happily being rapidly removed.

"Specific criticisms may include such things as the habit of certain types of manufacturers who advertise a new chemical or a specialty to the medical profession and then later to the public. The profession ceases to prescribe it, but the pharmacist is forced to supply the demand created by this advertising. If the pharmacists had been doing scientific thinking and had they been in close co-operation with their physicians, they could have prevented the development of this scheme and the physician would not have been a factor in unconsciously encouraging self-medication.

"Refilling of prescriptions without authorization and counter prescribing as exist

in some stores are evidences of ignorance and do not demonstrate either knowledge or astuteness.

"The pharmacist criticizes the all too common habit of saying, "Just get some aspirin tablets" or something by some coined fanciful name that is easy for the patient to remember. This is well intentioned and based upon a desire to save money for the patient. The patient tells his friends and they all buy it. This leads to supposed approval of self-medication. If the patient needs the drug it should be prescribed under its true scientific title in order that the physician may be assured of its strength and purity.

"Specialties with coined names easy to learn are often read from the prescription and asked for directly to save money. If the pharmacist is properly qualified and is a man of integrity he is entitled to a small professional fee when he is able to guarantee to the physician that his prescription is filled as written.

"I am still inclined to lay the blame at the door of the pharmacist, for he should follow up each such case, or any similar ones, with the physician concerned.

"Now what is the remedy? Cleveland pharmacists think they have found it. We have organized what is known as The Northern Ohio Branch of The American Pharmaceutical Association, which organization is devoted entirely to things professional. This new Society in no way supplants or supersedes the Northern Ohio Druggists' Association which has been in existence for over fifty years and which is still functioning.

"The work of the new Society is supplementary to that of the old one, but deals only with scientific and professional problems. Nearly all the members of the new Society belong also to the old one. The membership of this new Society is selective. It has adopted for its guidance a modified Academy of Medicine Constitution and By-Laws. A prospective member must make application in the usual manner, and this application is referred to an investigating committee. It determines the fitness of an applicant as an individual, his education and training, inspects his pharmacy as to equipment and library, its appearance and the manner in which it is kept and conducted, and even investigates the outside activities

of the individual to the end that we feel we can recommend him and his pharmacy to our physician friends as capable and trustworthy.

"It is the purpose of this Society to inform the physicians of this community who the members of this Society are. It is a further purpose to send to the physicians who wish it, regularly, information about new products and the present status of old ones. It purposes in time to have a central clearing point where physicians may turn for any information about drug products, either through their pharmacist member, or directly.

"The School of Pharmacy plans to aid in this work and its library and staff are ready to serve the physicians of this community.

"This Society has been working quietly and perfecting its organization for more than two years, and is now ready to become active. We shall be happy to discuss drug problems with our physicians and to adjust difficulties that may arise.

"Our Society is small, having less than fifty members at present, but it is growing and it will reach into every locality in this community wherever scientific medicine is practiced and where scientific pharmacy is needed."

MAGGOT'S PARADISE

Maurice L. Finberg, '35

An age old method has been rediscovered and put to work at Lakeside Hospital. Reference is made to the maggot treatment of bone injuries, in which larvae of blowflies are placed in the wound to clear up the decayed tissue, keep up blood circulation, and hasten healing.

This method was originally suggested by a French surgeon, Baron D. J. Larrey, shortly after the Napoleonic campaign in Egypt. A report issued by Science Service (Washington) says: "The baron states that in Syria the wounded were annoyed and often terrified by the appearance of 'the larvae of the blowfly' in their injuries. 'Nothing short of experience could convince them that these insects, far from being injurious to their wounds, promoted rather their cicatrization, by cutting short the

process of nature and by causing the separation of the cellular eschars, which they devoured. These larvae are indeed greedy only after putrefying substances, and never touch the parts which are endowed with life.'"

Various surgeons have experimented with this method from that time up to the World War, with various degrees of success. The modern use of maggots to clear up wounds, especially bone wounds, dates from observations made in the field during the World War.

From the time of the World War to the present time, surgeons all over the country have found results very gratifying. At Lakeside results have been better because of the profit of experience obtained from past experiments elsewhere. When the maggot treatment was first used, cases of tetanus or lockjaw was the result from germs that were on the maggots.

Now, the culture and growth of maggots are well taken care of and no injurious germ is on them. Fly eggs laid by the species *Phormis regina* and *Lucilia sericata* are subjected to chemical disinfection and then transferred to a sterile culture medium for hatching. The newly hatched maggots are next carefully tested for both aerobic and anaerobic bacterial contamination.

Then from the Lederle Laboratories in New York, the maggots are shipped in containers, packed in dry ice, to the various hospitals. The operation which usually precedes the first implantation of maggots should be thorough and extensive in order to open the wound widely and remove all the sequestrum that is accessible. The surgeon aims to expose as much infected area to the activity of the maggots as possible. In this respect, the operative procedure which proceeds maggot therapy should be just as complete as that associated with any other type of osteomyelitis treatment. The difference comes in that it is performed without the aid of chemical antiseptics since they are antagonistic to the maggots. The wound is measured accurately and strips of sponge rubber $\frac{1}{2}$ " wide and $\frac{1}{2}$ " thick are sewed tightly together so that the inner borders will fit exactly over the skin edges. The required size of 80-mesh brass strainer cloth is sewed to the top surfaces of the sponge rubber strips. This is what is known as the mag-

got cage and is sterilized with a solution of bi-chloride of mercury.

The edges of the skin close to the wound are painted with collodion, so that they are not sensitive to the maggots' endless crawling. It has been discovered that children are less sensitive to the maggot treatment than are grown-ups.

After implantation, the maggots are allowed to remain in the wound for a period of five days. On the fifth day they are flushed out of the wound with physiological saline. The wound is then wiped dry with a gauze sponge and a fresh supply of maggots is implanted. And so on; the average number of maggot treatments for a patient is six to eight, the actual number depending largely upon the rapidity with which the larvae die in the wound.

A very marked effect of maggot therapy is the stimulation of healing. New bone replaces the dead bone, and granulation tissue grows up to fill the wound, leaving only the epithelium to spread over it and complete the healing process. Disfiguration from deep pitting is thus reduced.

There have been cases of re-occurrence of the trouble after this treatment, but they are few and far between. The total results have been very gratifying, and the future should be very bright regarding the increasing service of the Maggot treatment.

STATE BOARD RESULTS

At about midnight one evening during the first week of July, when the Ohio State Board of Pharmacy was holding its regular meeting in Toledo to pass judgment upon the examination results of the June candidates, the Editor of the PHARMACON received a telegram from Mr. A. L. Flandermeyer, President of the Board, worded as follows: "All graduates 1931 Western Reserve University passed exams. Congratulations." This was several days before the results were published, and you can imagine how busy certain telephone lines were that night. The PHARMACON takes this opportunity to thank Mr. Flandermeyer for the genuine interest he has always shown in our School and for the many things he has done to promote

professional pharmacy and pharmacy law enforcement in Ohio.

Reserve has an enviable record as far as State Board examinations are concerned. For many years our candidates have been 100 per cent successful, and this achievement has become more or less of a tradition with our graduates. Here's something for you to live up to, Juniors and Seniors! Nothing less than 100 per cent success will be satisfactory next June!

The following people received their licenses as a result of the June examinations: Wanda J. Baygrowitz, Alexander Celke, Rufus O. Farris, Robert A. Fitch, Ruth L. Kotershall, Harry F. Valway, Jerome Adelstein, Wills H. Clinton, Joseph E. Eisenberg, George H. Gerlach, Clara G. Goldberg, Lister F. Graf, Robert A. Kumpf, Michael A. Lauria, Kenneth Lautenschlager, Russell B. McArtor, Nelson Rauschkolb, Nelson Schroeder, Laddie D. Sedely, and George W. Suntala.

Congratulations! Now that you're through maybe this old world of ours will get somewhere.

HISTORY OF DISPENSATORIES

Roger Marquand, '35

Imagine, if possible, all the pharmacies in Cleveland operating without a book of formulas or a handbook of any kind. What a jumble that would be! That was the exact predicament all over the United States about a hundred years ago. Each pharmacist prepared his medicines according to his own ideas. A movement to overcome this state of confusion was started in 1820 with the publication of the first United States Pharmacopoeia. This book was not popular, however, and the cause would have been lost had it not been for Dr. Wood of the Philadelphia College of Physicians. Dr. Wood decided to write a treatise on *Materia Medica* to popularize the new Pharmacopoeia.

The U. S. P. did not have any descriptions or tests for identity of the various drugs. Since doctors and pharmacists both collected their own herbs, it was necessary that they be able to tell them apart. For this reason Dr. Wood decided to include a

full description of the drugs in his book. He called Dr. Franklin Bache, Professor of Chemistry at Franklin Institute, and Mr. Daniel Smith, Professor of Pharmacy of Philadelphia College of Pharmacy, to confer with him on the idea of this new book. The work was divided, Dr. Wood having charge of the vegetable drugs, Dr. Bache of the mineral drugs, and Mr. Smith of the Pharmaceutical manipulations. Before long, however, Mr. Smith turned his part of the work over to Dr. Wood.

The resulting book, the Dispensatory of the United States of America, was published in 1833, and immediately became very popular, seventy-nine thousand copies being sold in thirty years. This is quite a large number since there were only thirty thousand physicians in the country.

After Dr. Bache's death in 1864, Dr. Wood continued alone until he himself died at the age of seventy-nine. At this time his duties fell to his nephew, Horatio C. Wood. Under this new editorship the book grew in fame and size until it is now the "Pharmacist's Bible" in this country and is an authority in countries all over the world.

In 1907 Dr. Wood died and his son, H. C. Wood, Jr., took up his work. Under his editorship the Dispensatory is still published.

During the one hundred years that this book has existed, it has grown considerably. The first edition covered 1,073 single column pages of 4x7½ inches. The last one written by George B. Wood covered 1,800 pages. The largest edition was in 1918. It had 1,928 pages. This was too large, however, so in the next and last edition the size was decreased 100 pages.

Thus has the United States Dispensatory grown both in size and in fame since its origin in 1833.

CURIOUS ACCIDENTS CAUSING BODILY INJURY

Among the curious and exceptional accidents which are taken from the files of the New York Insurance Fund are the following which are listed in *Health News*:

"A man was poisoned by daffodils; a park cleaner was bitten by a copperhead snake

which had selected a bit of paper for shelter; a man was blown against a rail by a high wind at the Battery, New York, and his leg injured; a man who tried to catch a pencil that fell from behind his ear was incapacitated for a week because the point pierced his hand; a spider in a cellar bit a plumber who was working there; a girl's facial muscles were paralyzed by fright at a loud noise; while handing a girl a bouquet of flowers a man pricked his finger and was in a hospital for several months; an autoist lost an eye when a pheasant flew against the windshield, breaking it; a bookkeeper turned his head suddenly and a pen in his hand pierced his nose, causing an infection which developed into a fatal brain abscess."

A tabulation published by the Industrial Hygiene Bulletin showing the compensated injuries for the State of New York for one year, states that a total of twelve hundred and seven cases and six deaths were due to wood splinter injuries, and five hundred and twenty-seven cases and one death to metal splinters. These figures are convincing proof of the need for prompt medical attention to splinter wounds as a safeguard against infection.

—*Good Health Magazine.*

CHINESE PHARMACY

Emory Sobonya, '34

In civilized countries pharmacy is defined as a profession, while in China it is still looked upon as a cult. The ancient Chinese pharmacists so organized pharmacy that the people had no knowledge of what transpired within that select circle. All the knowledge was handed down from father to son, and any outsider who was taken in the cult to perform the menial work had his hearing and power of speech destroyed, keeping all the knowledge of pharmacy in a few selected families. This state of affairs so retarded the progress of pharmacy that up to fifty years ago the same conditions existed in Chinese pharmacy that had existed in medieval times.

The Chinese form of medication consisted chiefly of pills which were prepared from the anatomy of the deer. Pills were made from the hoofs, antlers, hide, bones, and

muscular tissues, each part having, in their minds, a definite therapeutic value in the alleviation of disease. Pills were made from the dead body of the oldest man in the vicinity, and these were administered to the male children to insure them a long life. There is a record, in Chinese history, of an emperor who paid two hundred slaves for a pill made from the heart of a bold bandit. He gave this pill to his son whom he had acknowledged a coward, and immediately his son became more bold and soon was acknowledged the most courageous man in China.

Obviously the main reason for keeping pharmacy a secret cult in China was because the wise men knew that if ever their slight knowledge would be exposed, all professional respect and faith would be lost. This resulted in a state of affairs such that practically no advance has been made in the smaller communities where the ancient customs still prevail.

A traveler in his experience relates that during a journey through seventeen villages only three had any quinine which is, indeed, remarkable since the region was infested with malaria bearing insects.

Although slow to awake, China has made more progress since her awakening than other countries in a similar state of circumstance, and in the future is looked to as a valuable contributor to the profession of Pharmacy.

STUDENT BRANCH OF THE A. PH. A. IS ORGANIZED AT WESTERN RESERVE

For reasons most succinctly set forth in the preamble and by-laws below, twenty students of the School of Pharmacy have organized themselves into a branch of the American Pharmaceutical Association.

PREAMBLE AND BY-LAWS OF THE WESTERN RESERVE UNIVERSITY STUDENT BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

We, students of the School of Pharmacy of Western Reserve University, in order to align ourselves more definitely with those who are promoting the best interests of

professional pharmacy, and thereby more effectively stimulate our own interests and efforts for the good and welfare of our chosen profession, do hereby adopt the following by-laws:

1. **NAME**—The name of this organization shall be "The Western Reserve University Student Branch of the American Pharmaceutical Association."
2. **ORGANIZATION STATUS** — This Branch shall be a subsidiary branch of the Northern Ohio Branch of the American Pharmaceutical Association. Except for the specific provisions of these by-laws, the constitution and by-laws of each organization concerned shall take precedence in the following order:
 - (a) American Pharmaceutical Association
 - (b) Northern Ohio Branch of the American Pharmaceutical Association, *Rev. A. Ph. A. Jour.*, Vol. XVIII, No. 4 (Apr., 1929)
 - (c) Western Reserve University Student Branch of the American Pharmaceutical Association

The Student Branch shall have a distinct status at all times, and its accounts kept separately.

3. **MEMBERS**—The members of this Branch shall be elected from among the bona fide students of the School of Pharmacy of Western Reserve University, who shall have met the requirements for associate membership in the American Pharmaceutical Association, and for student membership in the Northern Ohio Branch of the American Pharmaceutical Association.
4. **OFFICERS**—The officers of the Student Branch shall consist of a President, a Vice-President, and a Secretary-Treasurer. All shall hold office for one year, or until their successors are elected and qualified. In case of absence or temporary disability, the Chairmen of the Program and Membership Committees, in the order named, shall substitute for either the

Vice-President or the Secretary-Treasurer at any regular meeting.

5. **COMMITTEES** — Within ten days subsequent to his election, the President shall appoint a Program Committee of three members. The Chairman of the Program Committee of the Northern Ohio Branch shall be a member, ex officio, of this Committee. The President shall also appoint a Membership Committee of three members. The Chairman of the Student Activities Committee of the School of Pharmacy of Western Reserve University shall be a member, ex officio, of this Committee. The officers of the Student Branch and the Chairmen of the Program and Membership Committees shall constitute the Executive Committee to transact the necessary routine business of the Student Branch.
6. **MEETINGS**—The meetings of the Student Branch shall be held on the second (2) Friday of each consecutive month from October to May, inclusive. When requested to do so by the Chairman of the Program Committee of the Northern Ohio Branch, the Student Branch shall take full charge of one joint meeting each year. Special meetings may be called by the President at such times and places as the Executive Committee may deem to be expedient and must be called by him on the written request of seven members of the Student Branch.
7. **ELECTIONS** — Election of officers shall be by ballot at the regular October meeting. Vacancies shall be filled by the Executive Committee.
8. **QUORUM**—Seven (7) members shall constitute a quorum.
9. **ORDER OF BUSINESS**—
 - (a) Call to order
 - (b) Reading of the minutes of the previous stated meeting
 - (c) Unfinished business
 - (d) New business
 - (e) Program
 - (f) Nominations and elections
 - (g) Adjournment

10. **AMENDMENTS** — These by-laws may be amended or altered only by and with the consent of the Policy Committee of the Northern Ohio Branch after a petition in writing, signed by two-thirds of the student branch membership, has been submitted.

The following students are the charter members of the Branch:

Charles R. Bennett
 Francis Bihn
 George H. Bruehler, Jr.
 George H. Gerlach
 Michael G. Girbino
 David M. Goldberg
 Meyer H. Goldberg
 Theodore E. Gutkowski
 Gustav C. Kostell
 Samuel L. Leiner
 Samuel Lester
 John C. Meresicky
 Edwin W. Miller
 Julius Miller
 John A. Obester (Secretary-Treasurer)
 Merwyn R. Rosene
 Karl W. Schweickardt (Vice-President)
 Ray R. Stemple
 Winton A. Webb (President)
 Albert L. Wells

ALUMNI NOTES

Lawrence Baldinger '29 received his Master's Degree at the University of Notre Dame last June. He is an instructor of pharmacy in the University's department of pharmacy.

Eugene R. Selzer '87 has been a pharmacist in Cleveland for 44 years. Just 50 years ago, when 18 years of age, he started in as an apprentice. For more than forty years Mr. Selzer has been a proprietor of ethical drug stores in one part or another of the city. His stores were always well directed, and the one now located near University Circle at the corner of Euclid Ave. and 105th Street is no exception. Mr. Selzer has always had the confidence of the physicians and the public because his stores are always real drug stores.

E. J. Mally '20 remembers us with the price of a year's subscription. The

PHARMACON extends sincere thanks. Mr. Mally hails from Chicago.

Joseph Albrecht '90, one of Cleveland's best known pharmacists, passed away in September. Always interested in local association work and pharmacist's co-operative enterprises, he was one of the most influential and best liked of Cleveland's retail drug dealers. Mr. Albrecht believed in the worthwhileness of pharmacy; much of his effort and money being spent for the common good of pharmacy. This statement is demonstrated by the fact that out of eight of his sons and daughters, two of each are carrying on as pharmacists.

STUDENT PARKING

Parking privileges for student cars are limited to the large parking space on the campus and to the streets in the vicinity of the University.

Lately, some of the students of the pharmacy school have overstepped these bounds, parking their automobiles in the small area south of the Pharmacy office. Despite the fact that a sign states definitely that this section is reserved for the faculty, some members of the school insist on trespassing. True, this is not such a serious offense, but in many instances it causes unnecessary difficulties which may be avoided if each driver among the student body will show a little respect for the rule.

BLOOD VESSELS INJURED BY TOBACCO SMOKING

Nicotin has long been known as a vascular poison. It influences the vaso-constrictors—the nerves that cause constriction of the blood vessels—and so causes spasms of these vessels. These functional disturbances gradually result in anatomic changes in the vessels, especially in the aorta and the coronary arteries arising from the heart. These vessels become sclerosed or hardened and inelastic, connective tissue taking the place of destroyed muscle fibers and elastic tissues. This condition embarrasses the heart and greatly increases its work.

In calling attention to these effects of nicotin poisoning, a German physician, K. Plénge (*Deutsche Medizinische Wochenschrift*), says that people using tobacco in excess often die suddenly, and he thinks that if careful post-mortem examinations could be made in all these cases, coronary sclerosis would often be detected as the cause. There is no doubt, he says, that nicotin is a strong vascular poison, but the susceptibility to nicotin poisoning varies in different persons.

—*Good Health Magazine.*



Marval D. Evans

NEW ASSISTANT IN PHARMACY

Mr. Marval D. Evans, a graduate of the University of Colorado, class of 1930, comes to our School this fall as an Assistant in Pharmacy and at the same time pursuing work for his Master's degree in the Western Reserve Graduate School.

ARE YOU HELPING TO MAINTAIN PHARMACY AS A PROFESSION?

If not, let us remind you of the words of one of Ohio's native sons—one of America's most eminent living men—Gen. Charles G. Dawes:

"If you work in a profession, in Heaven's name work for it. If you live by a profession, live for it. Help advance your co-worker. Respect the great power that protects you, that surrounds you with the advantages of organization, and that makes it possible for you to achieve results. Speak well for it. Stand for it. Stand for its professional supremacy. If you must obstruct or decry those who strive to help, why—quit the profession. But, as long as you are a part of a profession, do not belittle it. If you do you are loosening the tendrils that hold you to it, and with the first high wind that comes along you will be uprooted and blown away and probably you will never know why."

CLIMATIC CONDITIONS AS A CAUSE OF DISEASE OF THE RESPIRATORY TRACT

There is an age old tradition that diseases of the respiratory tract ordinarily known as "colds" are caused by climatic conditions. Traditions are ideas or conclusions that are arrived at by the racial experience handed down by word of mouth mostly. Of course they appear in the comments of daily press and other media of expression of the common mind. They have great value in many instances, especially in the so-called social customs and in unifying society as to proper usages, but in education and particularly in medicine they are often a handicap and are very hard to dislodge from the mind of the public. Social customs change slowly but in medicine rapid changes take place with which even the practitioner is liable to have difficulty in keeping in step.

This particular tradition as regards colds is one of these health traditions. In the first place, a "cold" is usually not due to cold. It is an inflammation in some particular spot in the respiratory tract produced by some definite organism of which there are a great variety and what is called a "cold" turns out to be anything from tonsillitis to meningitis. In other words, it is an acute infectious disease caused by a micro-organism and it belongs to the class of highly contagious diseases. Recent studies have shown that the organism may be ultra-microscopic.

The origin of the "cold" idea undoubtedly has its foundation in the fact that at the

onset of the invasion there is chilliness perhaps on the back of the hands or the knees or anywhere from this to a general severe chill which is due to the reaction of the body to the poison or toxemia. This occurs also in wound infections when the person will say "He has caught cold in his wound" or maybe has a tooth pulled and caught cold in it. It is difficult to identify this as the invasion of an infectious organism to which the victim was exposed two or three days before, for this is the usual incubation period of the ordinary cold.

Now the point in bringing up the question as to the cause of the cold is that, with the delusion that climatic conditions affect the health, people proceed in the wrong direction and use wrong methods in the prevention and treatment of diseases of the respiratory tract. Instead of protecting themselves and others by the use of such precautions as are consistent with a highly contagious disease, which would be efficient if carried out correctly, they are constantly concerned about drafts and slight changes in temperature and moisture. In the case of treatment, especially in tuberculosis, they incur great expense in order to travel long distances in search of a climate favorable for cure. The correct and sane procedure should be consistent with that applied to acute infectious diseases, i. e., to provide rest and fresh air and such additional treatment as will make the patient comfortable.

In the case of a disease like tuberculosis the whole process is very much more prolonged—in the time that elapses from the reaction before the symptoms appear, and also the time required for cure after the signs of illness disappear. In an acute infectious disease convalescence is well established as soon as the temperature is normal and cough has practically disappeared, whereas in tuberculosis healing has only begun to take place and the cure must be prolonged for months after the symptoms of illness disappear.

It is easy to conclude from the study of the question of ventilation that the main requirement is that there be constant relation between the temperature and the amount of moisture. The favorable climatic conditions are those in which the amount of moisture is relatively low when the temperature is high. When the amount of moisture and temperature are both high the

conditions are bad for health no matter how far out in the open country the patient may be. When there is not much motion in the air the main conditions to be fulfilled are those of rest and sufficient food in order to produce conditions favorable for recovery. These conditions can be provided in the residence district of a large city as well as at the mountain top.

—*Cleveland Division of Health,*
by Dr. E. P. Edwards.

VITAMIN A FROM CAROTIN

Maurice L. Finberg, '35

Dietarians, as well as their aids, have constantly been on the look-out for new ways of obtaining certain vitamins that are so essential to human life and well-being.

Ever since the discovery in the years, 1906 to 1915, of what we know, now, as vitamins, food materials of animals and humans have been probed, time and time again, for these necessary ingredients.

Sources of vitamin A, which is usually considered the most important and desirous of all the vitamins for satisfying the human requirements of energy, material for new growth and replacement of waste tissue as well as increasing human resistance to disease, were essentially the liver fats of many mammals and fishes.

In some of these, the liver oils of salmon, halibut, and cod-fish, vitamin A is accompanied by vitamin D. In others, it is not. Among these are the liver fats of sheep, calf and ox. Incidentally, it was shown that the liver oils of salmon and halibut contain one hundred times as much vitamin A as cod liver oil.

Green plants and vegetables were known to have this vitamin, and that its formation was greatly accelerated by the influence of light.

Then, evidence was presented in a report that animals can manufacture the growth-promoting vitamin A from carotin, the yellow coloring matter of some of their foods, by Dr. Thomas Moore of the Nutrition Laboratory, Cambridge, to the Medical Research Council.

This evidence completely reversed the earlier theory about vitamin A, that it was

not made by the animal, and that all of it found in animal bodies and glands came directly from the food eaten by the animal.

The vitamin A is always found together with the pigment, carotin. The yellow of eggs, of butter, yellow carrots and yellow corn are all full of vitamin A, and carotin. In green vegetables, which contain vitamin A, carotin is also present, but its color is hidden by the green color of chlorophyll, which is abundant in such plants.

Dr. Moore proved that vitamin A and carotin occur together and have exactly the same effect on growth and bodily vigor.

Certain investigators have discovered that chemical tests show that vitamin A and carotin are not identical and were puzzled as a consequence. This caused quite a bit of controversy, but Dr. Moore has straightened out this point.

He experimented for a while on some rats, giving them only certain foods lacking vitamin A, until their vitamin content was close to nil. Then he cut down on their regular diet and supplied them with carotin. Immediately, they started to pick up in weight and condition. Upon examination, these rats were discovered to have stored up a supply of vitamin A, therefore proving his theory.

Since then, carotin has been successfully used as a tonic for human ailments, and Dr. Moore has to be congratulated upon discovering a very good source of vitamin A.

BAD AIR

The question is, "What makes bad air bad?" For years the question of the impurities of the air has been studied. First it was concluded that naturally carbon dioxide was the poison in bad air because it was well known that it was thrown off during expiration or that it was diminution in the amount of oxygen which caused the symptoms. Further investigation showed immediately that neither increase in the amount of carbon dioxide or diminution in the amount of oxygen much beyond those quantities found in the conditions of the so-called "bad air" produced any symptoms whatever.

Further search for the unknown poison was at once made without avail. After long

tedious study at last it was discovered that the real factor was not chemical but the physical conditions of the air which produced the symptoms of bad air. In other words, it was found that it was one of three factors—the amount of moisture in the air, the temperature, and the movement of the air—which were the real causes. For example, where the temperature was high, the saturation of the moisture was high, and there was little motion, symptoms of so-called "bad air" began to appear at once, i. e., the conditions which prevented the escape of the body heat at a certain rate by the evaporation from perspiration when the temperature is high was the factor that produced the symptoms of bad air, especially when there is little movement in the air. One experiment which finally proved this to be true was as follows:

A volunteer seated in an air-tight cabinet inhaled air from the outside and exhaled into the cabinet in which he sat. On the outside another volunteer in a room in which the temperature was about 60° inhaled the air from the cabinet in which the first volunteer was seated, i. e., the air that he exhaled. The second volunteer breathed this air for hours without any symptoms, whereas the volunteer in the cabinet who was breathing outside fresh air began to have symptoms inside of an hour because his body was enclosed in hot moist air. It was found that, by placing an electric fan in this cabinet which could be started by a switch on the outside, the volunteer on the inside of the cabinet could get at least temporary relief at once.

The conditions in that experiment are exactly the conditions which prevail in any room with poor ventilation, too many people and too much heat. These conditions exist on a sultry summer day when people die of the heat. The saving thing is a breeze—sufficient motion to the air to favor the evaporation of perspiration. These conditions also exist when the clothing is too heavy or the temperature of the room is too high in winter.

Thus it is shown that it is not the air we breathe, but the air in which the body is which affects the health and, other things being equal, a low temperature with a fair amount of moisture is more nearly ideal for health. Concluding from the same facts, if

lower temperatures are invigorating for the body too much clothing also is weakening or depressing. In fact it was found that children may go almost naked in very low temperature and thrive. Revere has shown in his Sanatorium in the Alps that children thrive by exposure of the skin to the air and light.

Good air, then, is fresh, i. e., moving, cool and clean. The optimum condition for health so far as air is concerned is that, aside from sufficient oxygen, it be cool enough to carry off the body heat easily at a fair rate.

—*Cleveland Division of Health,
by Dr. E. P. Edwards.*

PHARMACY STUDENT COUNCIL IS ELECTED

The following council representatives have been elected by their respective classes for the year 1931-1932.

Seniors

Winton A. Webb (Class President)
George H. Gerlach
Clara G. Goldberg
Bertha H. Grosser

Juniors

Gustav C. Kostell (Class President)
Abe Hirsch
Edwin W. Miller

Sophomores

Philip H. Dunner (Class President)
Theodore Gutkowski

Freshmen

Norman Fretthold (Class President)

MERWYN R. ROSENE WINS THE ANNUAL PHARMACY SCHOLARSHIP

After a competitive examination, participated in by five members of this year's freshman class, the annual pharmacy scholarship of Western Reserve was awarded to Merwyn R. Rosene of Cleveland. The value of the award is \$300, which will be renewed for three successive years, provided the winner does outstanding work in class and laboratory assignments.

INFANTILE PARALYSIS

An interesting article on the epidemiology of poliomyelitis by Dr. W. Lloyd Aycock of the Harvard Infantile Paralysis Commission sets forth certain views regarding the disease, a few of which are enumerated.

1. The disease is transmitted by contact in a manner similar to measles and diphtheria except that differences in frequency may be accounted for by the fact that the initial exposure to the virus of poliomyelitis results in more subclinical immunization to the disease than in measles and diphtheria.
2. The infrequency of multiple cases in families and institutions and the rarity of the disease in nurses or attendants of cases can be accounted for by the frequency of subclinical immunization.
3. The rural preponderance of cases of the disease is probably more apparent than real.
4. The seasonableness of the disease may be due in a large measure to an individual fact or designated as physiological imbalance.
5. Passive or active immunization cannot be looked upon as practical in the prevention of the disease and the physiological fault which determines individual predisposition must be further studied.

DRUG STORE SPIDERS

By Bertha H. Grosser, '32

Don't tell me you have never watched a spider. Surely you have a little time to watch this little intelligent arthropod who works such wonders in your drug store.

If you are patient, you will see Arachne first stretch a rough polygon of cables from one box or bottle to another, dropping for the vertical lines and swinging for the horizontal. Then she makes a complete wheel by crisscrossing. All of these threads you will notice are very strong. Finally she works in the close-set sticky meshes of very fine texture. Then she sits in the center of her snare with head downward waiting for her customers. She charges them plenty.

If you see a second small spider nearby, you are looking at her husband. Arachne tolerates him throughout their courtship, but after the wedding day they become as one—he a part of her never to separate. Why? She eats him.

The 'Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

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Edward Hemmeyer, '33	Roger Marquand, '35

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WESTERN RESERVE SCHOOL OF PHARMACY

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EDITORIALS

SCHOLARSHIP

The time to talk about scholarship is at the beginning of a new term when everyone has a clear slate and fairly good intentions of studying conscientiously throughout the semester. Every year quite a large number of students drop out of school at about Thanksgiving recess because they find they cannot keep up with their studies. At least they believe they cannot keep up or catch up and, becoming discouraged, drop a course or leave school completely. This is very often such an unnecessary, such a pitiful and discouraging occurrence that it is well worth while to attempt to forestall it if possible. True, there may be a few students who haven't the mental or financial ability to remain in school, but these instances are relatively scarce. Now and then homesickness or loneliness, maladies hard to combat, claim a victim. However, more often by far, a disease which we may name "Pernicious Mental Inertia" takes a sweeping toll of university students.

Everyone hates a quitter. The few who do not, pity him. Every course you take here should be regarded as a challenge to your mental ability and skill. Pharmacy is your chosen profession. You are apparently going to school because you want to make good in it, and you are taking your assigned

courses because they will prepare you to do so. Anything worth doing at all is worth doing well, particularly when scholarships await those who do very well. A lot of you students certainly ought to be ashamed of yourselves. You have come here to a very expensive and more or less exclusively professional school which offers you the best pharmaceutical instruction obtainable. You have excellent libraries and modern laboratories at your disposal as well as trained successful men in all the fields of science to guide and advise you. Nobody expects you to be a genius. No one is going to force you to study, but you certainly are very foolish if you do not take advantage of some of these opportunities offered you.

Our Bulletin states that "A tuition scholarship is awarded annually to the freshman, sophomore and junior student adjudged by vote of the Executive Committee to rank the highest in scholarship, character and effort." No scholarship was awarded this year in either of the present sophomore or junior classes. Why not? Because there apparently isn't a man or woman in either group with character and determination enough to put forth the necessary effort to show that he is capable of being more than mediocre. We have too many poor, fair, and mediocre students among us. True, a student who is considered fair here in a school which is recognized as being the best

and most difficult in the state might do very well in another school, but nevertheless that does not excuse him. We have too little rivalry and too many absolutely absurd excuses for our lack of rivalry along scholastic lines. Too much "Pernicious Mental Inertia."

Three hundred dollars a year as long as you keep up your good work is a prize not to be overlooked. None or few of you can earn more than fifty cents an hour after school, and at that rate it would take you six hundred hours of work to earn three hundred dollars. If you spent a little less time working or playing outside and a little more time studying, surely some among you would find it well worth while. It merits a trial at any rate. Even if you do not win a scholarship, some of you will, perhaps, want to do graduate work in the future. If you think you will be admitted to good graduate schools such as ours, you are sadly mistaken. Your college record may not be such an influential factor if you intend to enter commercial pharmacy directly after graduation and will be content to spend the rest of your life doing the same thing. But for many positions it will mean everything and a good scholastic record will certainly improve your chances of a better recommendation.

Rho Chi, the only national honorary society with a status equivalent to that of Phi Beta Kappa in pharmaceutical circles, has a chapter in this pharmacy school. Two juniors and a somewhat larger number of seniors who have maintained a sufficiently high average during their first three years of college are annually selected for membership. This is perhaps the highest scholastic honor which can be conferred upon a pharmacy student and should be an incentive to you all to do better work. A Rho Chi Key is recognized on any campus and commands respect wherever pharmacists convene. We have a few Rho Chi men among us now. Let's hope we have many more in the making.

CLASS ELECTIONS

Class elections here at Reserve for the past several years have been purely a farce. Whether this was due to lack of cooperation, lack of school spirit or indifference, the results were

monotonously the same. To be sure we have always had three or four different factions in the student body, but nevertheless there was but little competition. The few men who were nominated for office were mechanically elected whether they were worthy of the positions or not. True, for a while there was a very unequal distribution of students among the outstanding fraternities, but this should not have made a particle of difference. The best men in the respective classes should be chosen and elected purely on a basis of merit, regardless of differences in religious or fraternal connections. Mass voting by fraternity groups weakens the individual character and merely develops a lot of robot "yes-men." What is more, college politics as seen in this pharmacy school for the past few years result in a monotonous repetition of petty machinations. The group which can pull the most political wires usually wins the resulting empty victory. A little more clean school spirit as demonstrated in part by one of our upper classes this year would not be out of place in the future elections of all our classes.

BOOST TINCTURE OF IODINE

Certain manufacturers of mercurochrome solution have obtained an injunction against the Ohio State Board of Pharmacy preventing it from prohibiting the sale of the antiseptic in stores not under the supervision of a registered pharmacist. This refusal to support pharmaceutical law enforcement throws a new light upon these manufacturing houses which profit by selling their goods to the druggists, yet refuse to cooperate with them to the extent of limiting the sale of a strictly pharmaceutical item to the drug trade. All the manufacturer cares about is the volume of distribution regardless of the character of his retailers. As a result, mercurochrome in Ohio becomes merely another "five and ten cent store" item to be handled by every grocery, confectionery, and dime store in the state. The selling price of mercurochrome will drop and pharmacists will have to lower their prices accordingly.

Contrast the sale of solution of mercurochrome with that of Tincture of Iodine, a

U. S. P. product which may be sold only in drug stores. Your legitimate profit on a sale of Tincture of Iodine which you yourself can prepare or buy in bulk at a reasonable price, is even now appreciably higher than the profit on a corresponding sale of mercurochrome solution. Boost Tincture of Iodine as a household antiseptic: first, because it is an official product of established merit; second, because mercurochrome is not the equivalent of Tincture of Iodine; and, third, because the manufacturers who put up mercurochrome solution are playing pharmacy for a sucker.

In its own right, mercurochrome has found a valuable place in medicine. However, in its guise as a substitute for Tincture of Iodine, outside of the realm of psychology perhaps, it has not by far measured up to expectations. The antiseptic value of mercurochrome is attributed principally to the slow liberation of metallic mercury, which, however, unfortunately is so tightly held in molecular combination that it is very difficult to demonstrate any disassociation whatsoever. True, the base of the compound is fluorescein, an organic dye which itself possesses mild antiseptic properties. However, these two considerations taken together fall short of the antiseptic standard set up by the old stand-by, Tincture of Iodine, U. S. P.

Cooperation among pharmacists who pretend to be professional or desire to promote a professional society is an absolute necessity. A profession, to maintain its status as such, must have legal recognition. It must have well defined ethical and legal boundaries within which it operates exclusively. When an agency attempts to infringe upon these rights, stifle it! A profession which is too prone to attack without any cooperative attempt to protect itself will not long be recognized as a profession.

The mercurochrome question is only one instance. There have been others and there will be more. You who read this publication are either students employed in drug stores, or commercial pharmacists in constant contact with the public. You sell countless bottles of both Tincture of Iodine and Solution of Mercurochrome daily. A word from you will, in the majority of cases, decide the question in every customer's mind when he buys a first aid antiseptic.

He wants the best. Give it to him and at the same time you will be sticking to your guns. Boost Tincture of Iodine!

CURRICULA

Many pharmacists at some time or other in their careers dream of studying medicine. Most of them never get much farther than that. A few do, however, and still more would if our average college curricula were so arranged as to give pharmacy students the proper prerequisite for medical school. Most pharmacy schools do this very thing but unfortunately ours has not as yet done so. If one of us wishes to enter medical school, he will either have to attend the summer session, or spend an extra year taking the required biology and, in some instances, psychology courses. This not only means a loss of time but also entails considerable additional cost and undoubtedly prevents many pharmacists from continuing their medical education. Such a situation is very unfortunate because in the opinion of the editor, we need more "pharmacist-physicians." A few such progressive men can do much more good in the way of spreading U. S. P. and N. F. propaganda among their colleagues than many times their number of commercial pharmacists.

One reasonable solution in our school would be to condense the freshman botany course into one semester, and in the second semester give the student his choice between more botany and zoology. This would enable him to take comparative anatomy and embryology which demand zoology as a prerequisite, in his senior year without any loss of time.

At any rate, a little consideration along this line by our faculty would not be out of place.

BIRTHS

Orren Brooks '25, reports the arrival of a daughter, Patricia Jean, in Seattle, Wash., sometime during the month of September.

Don Charles arrived in the home of Henry Kumpf '26, September 20, 1931, at Salem, Ohio.

Yasha Venar '27, now a junior in the medical school at Western Reserve, became

the proud father of a daughter during the past summer. Yasha was recently awarded a prize for the general excellency of his work in medicine.

Selected Editorial

FIFTEEN YEARS OF PROGRESS

In the Summer of 1916 Edward Spease, then assistant professor of pharmacy at Ohio State University and secretary of the College of Pharmacy there, was called to Cleveland to become dean of the Cleveland School of Pharmacy to succeed Dr. William C. Alpers, who had retired because of ill health. Dean Spease began his work in Cleveland in October, 1916; this month therefore completes fifteen years of his continuous incumbency of that position.

When Professor Spease came to it, the Cleveland School of Pharmacy, founded in 1882 as a trade school for drug store apprentices, had progressed to the point of having given for a period of about fifteen years day time instruction and laboratory work; of having had for twelve years the full-time services as dean and professor of pharmacy of Henry V. Army, even then an outstanding figure in American pharmacy, and of being housed in its own building, debt incumbered though it was, at Central Avenue and East 14th Street. Also, a nominal connection with Western Reserve University had been brought about. Under its terms the university issued a diploma to School of Pharmacy graduates, reserved the right of veto over appointments to the pharmacy faculty, but left the pharmacy school as a separate corporation with the obligation to conduct its own affairs, to do its own teaching and to be self-supporting. When Professor Army left here in 1912 he said that it would take at least ten years of hard work by an able man to make the school what it should be: an integral part of the university.

Major Tasks

The first major task which Dean Spease set for himself was to bring about an actual merging of the pharmacy school with the

university. By 1918 this had been accomplished, and since 1920 the School of Pharmacy of Western Reserve University has been housed on the W. R. U. campus.

To enlarge and improve the teaching staff and to raise matriculation standards was the next step. In 1916 the School of Pharmacy employed two full-time faculty members; the dean and one other. The present faculty numbers nine full-time instructors.

Since the coming of Dean Spease the School of Pharmacy has complied rigidly with the rather severe matriculation and curricular standards adopted by the Conference of Pharmaceutic Faculties. It has done so despite the competition of not too distant schools with lower academic standards and not averse to yielding a point here and there when occasion seemed to require it. Has done it, often braving the displeasure of employers whose clerks had to choose between quitting part-time work or quitting school; persisted also despite the declarations of occasional disgruntled students that the dean was arbitrary and inconsiderate. Whether one liked it or not, one had to measure up to get in or stay in as a Reserve Pharmic.

Hospital Manufacturing

The next major step was the establishing at the School of Pharmacy, of a hospital manufacturing and control laboratory. Its function is to manufacture without profit many of the standard galenicals and special formula preparations for some of the Cleveland hospitals, the development of new and special preparations for hospital use, the preparation of bacteriological stains and volumetric solutions and the testing of chemicals and other products purchased by the university hospitals and some others. To this enterprise some druggists objected. Hospitals hurt the retail drug business, therefore, they argued, a friend of the hospitals is an enemy of the drug trade and of all institutions, a pharmacy school, and its dean, of all men, should not be so aligned.

Such reasoning is inadequate, however. Pharmacy can not abdicate its historic and most essential function of preparing and supplying medicine for the sick. When a considerable proportion of the sick are treated in hospitals, pharmacy must be worthily represented there. As regards Cleveland hospitals, even the largest ones,

that was not true up to seven or eight years ago. Then, as now, Cleveland hospitals used great quantities of drugs. But whereas before Spease's innovation hospitals bought drugs as they did sheets of towels or other supplies, they now make some of their preparations; and more important still, all the large Cleveland hospitals now have competent pharmaceutical service, with full time trained and experienced pharmacists in charge, while in three large hospitals the ranking pharmacists have been promoted to the rank of general purchasing agent. This improved status of hospital pharmacy in Cleveland is due primarily to Dean Spease's initiative and energy.

What of It?

While from the short view this seems of no practical benefit to retail pharmacy, seems indeed inimical to it, the long view shows a truer picture. All of the sick are not in the hospitals. The physicians, nurses and dentists who come into contact with practical operative pharmacy as it is skillfully practiced in the large hospitals, will appreciate it and demand it in other hospitals and elsewhere; will be friendly to and sympathetic with retail druggists who faithfully and conscientiously practice it through difficulties. Such an attitude, if kept faith with, will make for slow but steady growth of the prescription and straight drug business.

To Dean Spease, at the completion of fifteen years of work, we extend felicitations. He has made noteworthy and fine progress under difficulties. Still in the prime of life and in good health, much may yet be expected of him. If we may voice a personal hope it is, that we may witness in Cleveland in the next fifteen years an advance in the status of professional pharmacy outside the hospitals comparable with the gains in prestige and security which the profession has made there. If Dean Spease and those working with him shall succeed measurably in bringing this about, they will have deserved well, not only of this generation, but of several future ones.

—From the Northern Ohio Druggist.

DANGER FROM LOW VOLTAGE ELECTRIC SHOCKS

Shocks by electricity of even such low voltage as that found in the ordinary household circuit are extremely dangerous and may cause death, Dr. Horatio B. Williams, of New York City, pointed out in a report to the American Medical Association.

Heretofore when people have died from shock with supposedly low voltages of electricity, such as from household circuits and appliances, it has been explained on the ground that the voltage had suddenly become greater than the usual 110 or 120 volts. Dr. Williams offered another explanation based on physiological rather than on physical grounds.

Within recent years medical scientists have learned that electricity under the pressure of a very low potential, often much less than 110 volts, affects the heart, causing a sort of tremor or wavering in its usual contraction, which physicians call fibrillation. Instead of all the muscle fibers contracting together, each of them does it separately without coordination. When the current passes through one part of the heart, this fibrillation occurs without interfering with the circulation; but when the current passes through another part of the heart, the circulation stops at once, and in all large animals death usually follows.

When the human skin is dry it is a good non-conductor, but when it is wet, large enough currents could pass to cause fatal fibrillation of the heart, Dr. Williams suggested. The skin is rarely absolutely dry, and perspiration keeps it somewhat moist; when this is copious, or when the skin is wet with soap and water, an electric current could easily pass through it. A slight cut or bruise of the skin also greatly lowers the resistance to electricity.

Household electric power lines are customarily grounded on one side. Contact between the other side and any part of the body becomes dangerous when the skin is wet enough to conduct. Water pipes, drain pipes, radiators, sinks and the conduits in which the power wires run are all usually well grounded. This, together with the fibrillation theory, explains the numerous cases of fatal electric shocks of persons touching electric appliances while in the bathtub, for instance.

"A person in a bathtub, making through his wet skin an excellent contact with the grounded drain pipe, runs a deadly risk if he happens to touch the metallic shell of a fixture which is in electrical contact with the ungrounded side of the circuit," Dr. Williams said. "Fixtures are not supposed to be in this condition, but there are so many opportunities for them to be or to become so that the danger is ever present.

"It may be dangerous to touch electric lamps and appliances with wet hands, especially when there are cuts and abrasions of the skin and particularly when there is a ground contact, as when one is in a bathtub."

Another danger spot is the chain pull switch with which many lamps are equipped. In some there is an insulting link, but many do not have this. A safe practice is to tie a piece of silk ribbon to the chain, particularly in the bathroom, kitchen and cellar. Home repair of electrical equipment may also be a source of danger. Even when the equipment works all right, the home repairman may not have properly grounded or insulated it.

—From *Science News*.

BISMUTH

Term Paper Submitted in Pharmacognosy
108

Joseph Jioia

Bismuth was first recognized as a metal by Agricola in 1520. Previous to that bismuth was confused with lead. It is found in small amounts in iron and copper ore and also with Tellurium. However, the bismuth used in medicine is mined from bismuth deposits in Bolivia.

Bismuth forms two insoluble basic salts that are widely used in medicine, namely, bismuth subnitrate and bismuth subcarbonate. Bismuth subnitrate was first introduced in medicine by Dr. Odier and is chiefly used for the local effect upon irritated mucous membranes where it acts as a sedative and soothing protective. Due to these and other properties these insoluble salts have been found useful in subacute gastritis, gastralgia, pyrosis, gastric ulcers, diarrhea, dysentery, and also as a dusting agent in leucorrhoea. Bismuth is chiefly

used for injections in first stages of gonorrhea and in the treatment of syphilis.

The idea of using bismuth in the treatment of syphilis was first suggested in 1899 by Balzer; however, the high toxicity of ammonium bismuth citrate which he used prevented its adaptation in the treatment of human patients. He was followed in 1916 by Santon and Robert, who reported on the action of that metal on the spirillosis of poultry and on trypanosomiasis. The first references to the use of sodium tartrobismuthate was made by Sazerac and Levaditi in 1921. Fournier and Guerrot, who made an extensive study of the action of the drug, confirmed the results of Sazerac and Levaditi. In all primary cases the results were uniformly good from both clinical and serological point of view. The results were also good in the case of secondary manifestations. With regards to tertiary lesions they found that usually the bismuth acted in remarkably rapid fashion in the forms commonly encountered.

Bismuth today is believed by many to be next in value in the treatment of syphilis, to the arsenobenzols. Milan goes further and states that if the therapeutic value of arsphenamine be taken as ten, the therapeutic value of bismuth is seven, and that of mercury is four.

Due to bismuth's systemic action in the treatment of syphilis, compounds and preparations of soluble and insoluble bismuth salts and metallic bismuth have been employed. These bismuth preparations used for treatment of syphilis are many and generally fall in one of four types.

1. The metallic suspensions
2. The insoluble bismuth salts
3. The water-soluble and tissue-insoluble
4. The water-soluble and tissue-soluble.

The use of metallic bismuth or so-called colloidal bismuth suspensions is unfortunate as metallic bismuth is very slowly absorbed and its presence in the muscle results in very undesirable pathological changes.

The insoluble bismuth salts, when suspended in oil and injected into the muscles, do not cause severe injury; they are non-irritating, non-corrosive, and lie directly in contact with the muscle fibers without causing severe inflammatory reaction. Furthermore the process of solution and diffusion commences immediately after the injection, since the salicylate type of compounds are

soluble in the faintly acid medium resulting from slight destruction of the tissues.

The water-soluble but tissue fluid insoluble bismuth salts include all the commonly known inorganic bismuth salts, such as the tartrates, citrates and galactates. Given intravenously in aqueous solutions, these salts are extremely toxic and are of benefit when given intramuscularly. These salts are soluble in water, but when brought into contact with the tissue fluids they become water insoluble and their toxicity decreases as does their efficiency; to combat this the salts are suspended in an organic oil.

The water-soluble and tissue-soluble bismuth preparations for the treatment of syphilis are at present limited to one compound, Thio-Bismol, a bismuth salt of thio-glycollic acid, manufactured by Parke-Davis. This salt, according to the manufacturer is painless on intra-muscular injection, very slight muscular injury is noted and no bismuth can be demonstrated after the second or third hour following injection, showing the rapidity with which it is absorbed.

Knowing the spirocheticidal potency of bismuth preparations, and also the numerous different preparations on the market, current dissensions center largely about the problems of choice of therapeutic preparations, mode of administration and their limitations and contra-indications of the different preparations. In a study sponsored by the Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association, Cole-Farmer-Mrskdjian demonstrated that the use of suspensions of finely divided metallic bismuth is inadvisable, for such preparations tend to remain unabsorbed for long periods. This fact has been established by roentgenographic observations and warns against accumulative action of toxic substance. Insoluble salts such as the oleate likewise failed to indicate worth while absorption. Bismuth salicylate also is not above objection, and its use should be replaced by one of the more soluble bismuth salts such as potassium bismuth tartrate preparation. In contrast with arsenical therapy the intravenous administration of bismuth compounds appears strictly contra-indicated.

Experiments performed by Sutton,

Gruhzit and Herzog showed that water soluble bismuth salts were found to be too toxic when administered intravenously and too painful when given intramuscularly, consequently the insoluble bismuth preparations became popular because of their innocuity, tolerance and comparative good therapeutic results. The apparently slow rate of absorption of the insoluble preparations of bismuth had led many to fear a cumulative action similar to that of mercury. This action is possible either when the depot becomes quickly depleted and the bismuth is thrown in the general circulation or when the various tissues under certain disease conditions liberate the bound bismuth and produce aggravation of the existing disease conditions similar to the exacerbations in chronic lead poisoning.

Gruhzit-Tendick and Sultzaberger demonstrated that the roentgen ray studies of bismuth absorption from the site of injection have led to contradictory results. These differences Gruhzit and his co-workers attributes to the difference in X-ray technique of the different workers and by the difference in the location of the site of injection, as a bismuth depot in an active muscle remains there a shorter time than a similar depot in a passive lumbar muscle. The X-ray shadow may be considerably enlarged and prolonged by the degree of calcification taking place in the saponified oil and in the injured tissues. These calcium deposits may give an erroneous impression as to the presence of unabsorbed bismuth. Some preparations produce considerable necrotic areas in which the bismuth particles remain finely diffused and cast little or no shadow on the X-ray film. To avoid the above uncertain factors entering the study of bismuth absorption by roentgen rays they discontinued this method in preference for chemical analysis.

Healthy dogs were injected with a known amount of bismuth preparation into the inner adductor muscles of the thigh. The dogs were kept in large cages permitting partial exercise. At a desired interval the dogs were killed; the injected muscle group was excised digested with concentrated nitric acid, etc.; and the amount of bismuth left in the muscle determined quantitatively.

The insoluble bismuth compounds included;—Bismuth salicylate suspended in olive oil plus 10 per cent each of camphor

and creosote manufactured by Parke-Davis & Co.

Bismuth potassium tartrate with butyn manufactured by Abbott Co.

Bismuth oleate manufactured by Hoffman La Roche Co.,

Results:	8 days		14 days		17 to 21 days	
	MG	%	MG	%	MG	%
Bismuth Salicylate	43.3	67.4	42.8	92.8	41.9	94.8
Bismuth Oleate	—	—	16.0	45.7	20.7	59.2
Dipotassium Bismuth Tartrate	12.7	64.7	23.2	93.0	38.8	90.9

The results show that the absorption of bismuth preparations from the site of injection is not the same for the different preparations, and were also found to be quite at variance with results determined by Cole with the use of roentgen rays. This date definitely disperses the fear of cumulative action as far as the rate of absorption is concerned. The mobilization of bismuth under adverse conditions, however, does not exclude the possibility of cumulative action.

Elimination

The elimination of bismuth salts depends almost entirely upon the solubility of the bismuth preparation in the tissue. Fournier and Guerrot working with the insoluble tartrobismuthate found that urinary elimination began eighteen to twenty-four hours after the first injection. Gustave Fritz states that bismuth is eliminated from the kidneys, intestines and salivary glands. The greatest amount was eliminated through the kidneys (80 per cent). However, the elimination was slow and the bismuth was retained and stored in the different tissues to the extent of 50 per cent, over a period of six months.

Distribution

Bismuth is distributed into every organ of the body with deposition being more concentrated in the kidneys, spleen and bone.

Toxicity

Bismuth is a drug of low toxicity, it is also a drug that gives warning before fatal results occur by darkening the gums to a purplish blue and by causing foul breath. The antidote in this case is the removal of the drug until the blue line of the gums disappears.

Mode of Administration

Bismuth salts are to be administered by the intramuscular route only. The solution

of the salt should be injected into the buttocks in the same manner as the mercury preparations.

Therapy

Bismuth, whether in metallic form or in the form of salts, is an inert substance which can be changed by some constituent of the tissues, known for convenience as Bismogen, into a new compound of unknown constitution called Bismoxyl, and in this form is of high therapeutic value. Bismuth is particularly recommended for the treatment of late syphilis and as an adjuvant to the arsphenamines in the primary and secondary stages. It is the drug of choice in cases resistant or intolerant to arsphenamine therapy, and is also valuable in the treatment of hereditary syphilis in children.

One of the most effective treatments for syphilis consists of a six week course of arsphenamine, two injections per week; followed by a six week course of bismuth, two injections per week; followed by a six week course of mercury, two injections per week. This is continued for three years, and after that time if the patient shows three negative Wasserman tests in succession he is pronounced cured.

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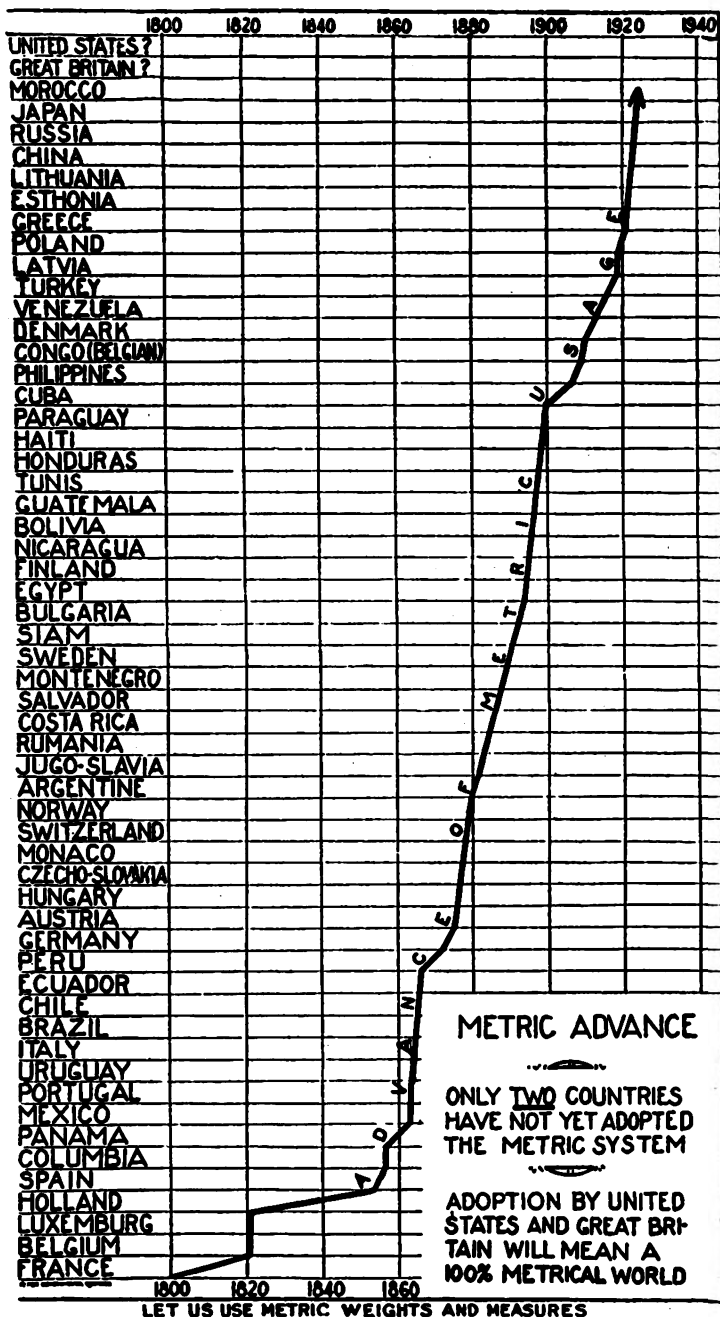
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The Tree Surgeon

The science of tree surgery
Appeals tremendously to me.
Through forest, meadow, grove, and park
The surgeon roams and looks at bark
And when he feels the itch to climb
He has a very pleasant time
Ascending high above the cows,
To feel the pulses of the boughs.
And safely perched in oak or spruce,
He must be laughing like the deuce
To think that no one can high-hat him,
And bill collectors can't get at him.
—Postscripts.

Why should English speaking peoples cling to their archaic systems of weights and measures while other nations are using a modern scientific system?

We crave a greater outlet for our manufactured products; common sense dictates that we mark them so that foreign nations may understand and appreciate them. The graph below tells a story that we have been slow to interpret in terms of action.



FRATERNITIES

PHI DELTA CHI NEWS

Another vacation has come to a close and everyone has taken upon himself that goal of good work so that he may do his share in "Helping to maintain pharmacy as a profession." We are all looking forward to a very successful year.

Our social functions to date have consisted of a smoker, held on the evening of August the twentieth. This was held for the benefit of the prospective students of pharmacy school so that they could become better acquainted with the ideals and members of Phi Delta Chi and of the faculty of pharmacy school. We held another smoker on registration day at which time our new men took their final steps in pledging with us. Both occasions brought forth a goodly crowd of both alumni and faculty members, and we wish to extend our sincere thanks to those giving us this wonderful support.

Our pledge organization started out with a bang. This group consists of nine men who, by all appearances, have the make up of good students and good fraternity men. They are N. C. Fretthold of Lakewood, F. R. Stevenson of Galion, Ohio, Dan H. Palmer of Cleveland, Geo. E. Hlavin of Cleveland, Charles Johnson of Cleveland, Robert Bonheimer of Canton, H. Skopin of Cleveland, G. Johnston of New Philadelphia, and C. Pierstorff of Cleveland. These pledges had their first meeting and Foster Stevenson, "Steve", was elected president, G. Johnston, Vice-President, C. Johnson, Treasurer, and R. Bonheimer, Secretary. The active men are expecting great things from these new men. We wish to thank Brothers Anderson and Steidl for helping us to entertain these new men on the opening day of school.

The active chapter is composed of C. R. Bennett of Salem, E. W. Miller of Alliance, G. H. Breuhler of Port Huron, Mich., D. C. Gerber of Canton and A. A. Armstrong of Lisbon. All the active men are living in the chapter house. Our officers for the coming year are E. W. Miller, President; C. R. Bennett, Vice-President and Secretary; G. H. Breuhler, Treasurer; K. C. Gerber, W.M.A.; and A. Armstrong, W.P.

The active men of Alpha Alpha wish to congratulate Brother Dean Spease on his wonderful enrollment in the freshman class.

Professor Edward Davy has gratefully consented to be our faculty advisor for the coming year.

Our Athletic situation seems to be very good this year. We have several men who were on the Pharmacy basketball squad last year, and it has been rumored that we have some good athletes among our new men.

Brother M. D. Evans has been added to our faculty list. Brother Evans serves in the capacity of assistant instructor in pharmacy, and he is also carrying graduate work. Good luck, Brother Evans.

Brother Gerber is our steward for the coming year, and if we get three meals a day like we have been getting, we will all be troubled with obesity.

ALUMNI NEWS

Brother E. T. Cook has resigned from the Marshall Drug Co., and is going to devote his professional services to the Upjohn Co. We know Upjohn will be a big success from now on. Good luck, Brother Earl.

Brother Anderson has again resumed his work at the W. R. U. Dental School.

Brother Robert Kumpf is at the City Hospital Pharmacy.

Brother Richard Koch remains at the Cleveland Clinic Pharmacy.

Brother Baldinger resumed his studies for his Doctor's degree at Notre Dame University.

Brother Gallagher is with Standard Drug Co. in E. Cleveland.

Brother Ischie is still peddling Coca Cola in his little red auto.

Brother Henry Kumpf is with the Brown Drug Co. of Salem.

Brother Kuttler has recently acquired himself a wife. Congrats, "Al".

Brother Clarence Spiece is on his way to medical school in Texas.

Brother Paul Cusick is around someplace.

Brother Don Kessler is managing one of the Marshall Stores.

Brother Carl Shane is now working in Cleveland.

Brother Paul Steidl is still in Akron.

Brother Breuhler is with the White Cross Drug Co. of Cleveland.

Brother Schreiner remains with the Standard Drug Co.

Brothers Henry Kumpf and Robert Millager have recently been blessed with sons. Congrats, Brothers.

Brother Lautenschlager is managing a store in Akron.

Brother Rauschkolb is at his father's pharmacy on the square.

Brother Sedely is with the Marshall Drug Co.

Brother Schroeder is with the Streich Pharmacy.

KAPPA PSI NEWS

Kappa Psi extends a greeting to all the students who are in the School of Pharmacy for the first time this fall. We feel that this has been an advantageous move on their part, and hope that they will prosper, both while in college and after graduation.

A greeting is also extended to our new faculty member, Mr. Evans, and we rest assured that he will find Cleveland to his liking.

Kappa Psi wishes to announce the pledging of the following men: Roger Marquand, Myron Chichota, Stanley v. Ziolek, Leonard C. Janicki, George R. Motoasca, Peter Henz, and Emory Megyery.

On Friday evening, October 2, a pledge party and dance was held at the Green Ridge Country Club. About forty-five couples danced to the music of the Brownies, the versatile combination which furnished entertainment for those present. The success of this affair was due to Brother Webb's ability as chairman of the Entertainment Committee, and his co-workers, Brothers Hoefler and Meresicky. We trust that Brother Webb and his committee will be equally successful with our future social functions. Beta-Beta wishes to acknowledge the cooperation on the part of our faculty and alumni brothers. Brothers Spease, Bacon, Hartman, Bartholomew, Hart, Schribner, Blakeway, Neely, Fitch, Celke, and Hudson were among those present. Keep up the good work, brothers.

Our annual pledge smoker was held on

the evening of Registration Day. Those present benefited by a discussion on, "The Pharmacist, The Physician, and The Hospital Clinic". Dr. Balehoubeck's and Mr. Chamberlain's contributions proved to be quite educational as well as interesting. Dean Spease paid us a short visit in the early evening.

Beta-Beta chapter has introduced a program of talks and discussions. These talks will be given at the chapter house on Tuesday evenings, after our regular business meetings. The public is cordially invited. The topics will pertain to Pharmacy and its allied sciences. The speakers will include faculty members, alumni members, and persons interested in special fields of pharmacy.

The next event on our social calendar is a House Party, which will be held at the chapter house on Friday evening, October 30. We hope to make this an old fashioned Halloween Party with the traditional pumpkins, corn, and broomsticks. Plan to spend the evening with us.

Our House Party will be followed by our Fall Initiation, on Saturday, November twenty-first. At this initiation we plan to increase our active roll by three names. With the addition of these men, we will have an active chapter of eleven members.

Those of the faculty who have observed that our men move less speedily the first hour of the afternoons may lay the blame to the bounteous meals served at our table. We are always glad to see old faces and to greet new ones between the hours of twelve and one. Dinner is served from Monday to Friday, inclusive, at 12:15 P. M.

Brother Walway has been elected our Faculty Adviser for this year. Brother Walway is taking Brother Stockhaus' place as Demonstrator in Pharmacy.

Brother Stockhaus is working for his Doctor's degree at the University of Michigan. We take this medium to wish him every success.

We are glad to have Brothers Hoefler, Kaufhold, Lager, and Pledge Morse back with us again this year.

We were sorry to learn that Brother Hickernell was recently operated on for appendicitis. Each and every brother at Beta-Beta chapter wishes him a speedy recovery.

Brother Celke is now the owner of a drug

store on West 25th Street. We wish him success in his new venture.

Congratulations, Brother Young. Charlie is now a proud father.

Brother Schweickardt and his wife are now living at 2065 Cornell Road.

Brothers Stimpson, Utemark, and Fox were among the recent visitors at the house.

Brother McArtor and Pledge Henderson visited us recently. Brother McArtor is working in Salem, O. Pledge Henderson has transferred to Ohio State.

Brother Lechner is working at 6500 Fleet Ave.

Pledge Perifano is attending Hahnemann Medical School.

ALPHA ZETA OMEGA NEWS

Alpha Zeta Omega starts this year with pleasant memories of the wonderful times enjoyed by the Fraters during the past summer. The Azoan Cottage at Stop 250, Lake Shore Boulevard, was the scene of many happy meetings, particularly the annual clambake which was held by the light of the moon near the surging Lake Erie waters. Frater Joe Eisenberg had the pleasure of throwing a celebration party after successfully passing the State Board. Not to be outdone, Frater Franklin gave the boys a treat in honor of his first-born.

A good will trip was made to the Pittsburgh Chapter by Fraters Abe Harris and Joe Eisenberg. Both reported having a very fine time and bring back greetings and best regards from the boys in the Smoky City.

The following men were elected officers during the latter part of June: Frater Lessowitz, President; Frater Eisenberg, Vice-President; Frater Miller, Secretary; Frater Dunner, Treasurer.

The convention held at Cincinnati, July 1-4, was a huge success. Among those attending from Theta Chapter were Fraters Abe Harris, Milford Harris, Norman Weintraub, Joe Eisenberg, Jack Franklin, Abe Amster, Al Baskind, and Milford Berger.

This is a good opportunity to announce the engagement of Milford Harris to charming Lillian Freund. This has been expected for some time, but Milford isn't fooling now.

David Baskind, David Goldberg, Samuel Cantor, David Katowitz, Harold Leopold, and Samuel Kanter are the new pledges this fall. Congratulations!

EXPRESSED OIL

R

"Have you had any cases yet?" the old Doc asked the young Doc.

"One," he replied, "an O.B. case."

"How did you get along?"

"Well, the mother died and the baby died, but I believe I'll save the old man yet."

R

And have you heard about the two old maids who took a tramp in the woods?

R

Bob: "Helen, I'm not half good enough for you."

Helen: "Oh, you talk just like my family."

—Purdue Pharmacist.

R

Small Boy: "Dad, how do they catch lunatics?"

Father: "With face powder, beautiful dresses, and pretty smiles, my son."

—Tid-Bits.

R

Zak: Woman, don't look at me like that.

Whack: Why not?

Zak: I've got a wife and three kids and I want to keep them.

R

Campus Cop: "Move that car along!"

Co-ed: "Don't get fresh, I'm a Delta."

Aforementioned Officer: "I don't care if your a whole d—n peninsula, move that wreck!"

R

At last we've found the most unhappy man in the world, a sea sick pharmacy student on the way to Detroit and suffering from lockjaw.

R

Overpaid

Graduate: "Will you pay me what I'm worth?"

Employer: "I'll do better than that. I'll give you a small salary to start with."

—Boston News Bureau.

R

Sabo had a pink necktie,
He wears that tie no more,
For what he thought was H₂O
Was H₂SO₄.

R

From Life's book of tears and laughter
We have gained this bit of lore—
We'd rather a morning after
Than never a night before.

—Summary.

R

Doctor: "You are a great deal better this morning, I see. You followed my directions and that prescription did the business."

Patient: "I couldn't take any of that prescription you gave me, doctor."

Doctor: "What! What do you mean, you couldn't take any of it?"

Patient: "How could I—it says on the label, 'Keep bottle tightly corked.'"

—Medical Students Magazine.

R

That doctor who said kissing shortens life undoubtedly meant, single life.

—Louisville Times.

R

Dumb Home Ec: "The potatoes are only half-cooked."

Dumber: "Then eat the half that's cooked."

—Purdue Pharmacist.

R

Bert: "Where did you get those big tender sympathetic eyes?"

Webb: "They came with my face."

R

Fussy Lady Patient: "I was suffering so much, doctor, that I wanted to die."

Doctor: "You did right to call me in, dear lady."

—Medical Students Magazine.

R

Expectorate is a nasty word, but it's worse if you're tongue tied.

R

Karl came home, and, as they say in the movies, found his wife sewing on a tiny garment.

"Darling," he cried, "why didn't you tell me?"

"Oh, don't be silly, Karl," said she, "this is my new dinner gown."

R

"Do you mean to say," asked the magistrate, "that such a physical wreck as your husband gave you that black eye?" The woman smiled proudly. "'E wasn't a physical wreck, your worship," she said, "until 'e gave me that black eye."

—Purdue Pharmacist.

R

Patient (angrily): The size of your bill makes my blood boil.

Doctor: That will be twenty dollars more for sterilizing your system.

—Summary.

R

If you are caught red-handed, be nonchalant—tell 'em it's mercurochrome.

R

If at first you don't succeed, try the make-up.

R

Not Contagious

"Can't you come and see our new baby, Clara?" asked little Blotto. "It was borned just yesterday."

"Oh, I'd better wait until your mother isn't so ill," replied Clara.

"But you needn't worry," Blotto insisted. "It isn't catching."

R

Dunner: "I know a man who eats fire."

Gerber: "That's nothing. I know a man who inhales Camels."

R

Misnomer

What did you say your name was?

Oh, I'm a Gopher.

How's that?

Why, when the boys want beer, I go for it.

R

This is the grave of a cute little girl who had a cute little figure, a cute little curl, a cute little foot, a cute little way.—A cute indigestion took her away.

—Lafayette Lyre.

R

Weinstein: "Dr. Bacon, I shall never forget you. I am indebted to you for all I know."

Dr. Bacon: "Oh, don't mention such a trifle."

R

A Good Come-Back

A loud voiced orator was holding forth at the street corner when he was interrupted by one of the audience. "Come down, old man, an' talk sense. You're nothin' but a blitherin' idiot."

"Be quiet," said the speaker, "you're drunk!"

"I know," said the man, "but I shall be sober in the morning and you'll still be an idiot."

The Reserve Pharmakon

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Some Newer Forms of Medication

By Sister Mary Alma, Class of 1921

Pharmacist at St. Thomas Hospital, Akron, Ohio

"A drug," according to the United States Pharmacopoeia, "is any substance or mixture of substances intended to be used for the cure, mitigation or prevention of disease of man or other animals." To get a better idea of what are new drugs we must first review in brief what we mean by the officially recognized drugs.

The United States Pharmacopoeia or U. S. P. and the National Formulary or N. F. are our Standards as they contain the drugs that are now official.

The U. S. P. is published by the authority of the United States Pharmacopoeial Convention, prepared by the Committee of Revision and published by the Board of Trustees. It is revised every ten years. The last revision became official January first, 1926.

The physicians of the Committee are given the responsibility of finally deciding the admissions to the U. S. P. of therapeutically active substances, the pharmacists being responsible for those which are pharmaceutical necessities. That would mean, for instance, that alcohol might not be considered a therapeutic agent by the physicians, yet the druggists would need it to prepare tinctures and other preparations which are therapeutic agents.

In each revision of the Pharmacopoeia some new drugs are added that have been discovered or their value proved since the last revision. Likewise some drugs that are no longer considered of value are deleted. Some of the drugs added to the last revision include acetylsalicylic acid, commonly known as aspirin; mild silver protein, introduced into medicine as argyrol; barbital, introduced as veronal; dextrose, arsephenamine, neoarsephenamine, phenobarbital, introduced as luminal; procaine, introduced as novocaine; whiskey and brandy. In regard to the latter, whiskey and brandy were

in the old Pharmacopoeias many years ago but had been deleted as the Committee on Revision had decided that they were beverages and not medicines. After prohibition became a law, although the American Medical Association had previously declared these liquors to be unnecessary as therapeutic agents, it saw fit to change its mind. Obviously, it then became necessary for the Committee on Revision to reintroduce them.

The purpose of the National Formulary is to supply definite formulas for preparations that are sufficiently used in medicine throughout the United States and its possessions for which formulas are not included in the U. S. P. The N. F. is sort of supplementary to the U. S. P. and ranks next to it. Sometimes a drug is transferred to the U. S. P. from the N. F. as it becomes sufficiently important. Occasionally a drug is dropped from the U. S. P. and later taken up by the N. F.

If we had the U. S. P. and N. F. our problem would be simple. It is the hundreds of new medicines and old medicines under new names, as well as numerous patent medicines with secret formulas that confuse us every day.

The New and Non-Official Remedies, called N. N. R. is published by the American Medical Association. As new drugs are discovered and submitted to it for examination they are investigated by the Council on Pharmacy and Chemistry and if claims for it seem justified they are admitted for one year to the N. N. R. The N. N. R. is revised annually. The Council will not accept a patent medicine having a secret formula. The reasons for this are obvious. Many of the drugs admitted to the N. N. R. do not come up to expectations or do not justify the claims made for them and are dropped from the next revision.

Sometimes drugs are admitted into official or non-official medicine for one purpose and later found to be of greater value for a different purpose. Sometimes they are thought to be harmless and are found later to be dangerous. Heroin was first introduced into medicine as a non-habit-forming drug for the treatment of drug addicts and to take the place of morphine in relieving pain. We all know the outcome. It was found to be the most habit-forming drug we know of and in recent years it was found that ninety per cent of the drug addicts in New York were addicted to Heroin. Conditions became so bad that Heroin was omitted entirely from official medicine and it is not now permitted to be made or imported into the United States. Is it possible that some of the new hypnotics that are so-called non-habit-forming may meet a like fact? We have all perhaps seen veronal or luminal addicts.

Then again we have new uses for old drugs. An example of that is the use of Magnesium Sulphate in synergistic analgesia. For instance, in maternity practice it has been shown that the use of Morphine will keep the patient comfortable for about three hours during labor, but if two cc of 50% Magnesium Sulphate is given intramuscularly at the same time as the Morphine is given the effects will last from eight to twelve hours. If rectal analgesia is used at the same time the rest of the technique consists essentially of injecting per rectum a mixture of quinine and ether in olive oil. The quinine keeps up the uterine contractions while the patient is kept more or less asleep with the ether which is slowly absorbed from the intestinal tract.

The N. N. R. was founded to combat the evils that had grown up in the field of proprietary medicines. Year after year the Council on Pharmacy and Chemistry has sifted the mass of new remedies put out by pharmaceutical manufacturers, choosing those which had promise of real worth for description in its annual publication. Many of the drugs thus approved by the Council and received into the N. N. R. have been later added to the Pharmacopoeia in its next revision. When a drug is taken up by the U. S. P. it is dropped from the N. N. R. as no longer needing a place there.

We must remember that there are millions of dollars spent annually in seeking new remedies, not only in the pharmaceuti-

cal laboratories, but also in such places as Cancer Research Laboratories and the Rockefeller Institute.

Among the newer drugs whose description appear for the first time in the N. N. R. are:

Bismarsen, which is Bismuth Sulpharsenophenamine, used in the treatment of syphilis.

Dial, a hypnotic put up by the Ciba Company.

Calcium Gluconate, a form of calcium that can be given intramuscularly or intravenously, put up by the Sandoz Company.

Pitocin, the oxytocic principle of the posterior pituitary gland, manufactured by Parke, Davis and Company.

Pitressin, the pressor principle of the posterior pituitary gland, manufactured by Parke Davis and Company.

Viosterol, an irradiated oil, for the treatment of rickets or any calcium deficiency.

Ephedrine preparations, used in place of epinephrine.

Butyn, a new local anesthetic to replace cocaine.

Procaine, another local anesthetic which first was introduced as Novocaine.

Chlorazene and Hychlorite, proprietary preparations for making Dakin's solution.

Amidopyrine, the accepted name for pyramidon.

Neutral Acriflavine, a new antiseptic that can be used locally or intravenously.

Phenolbarbital, introduced in medicine as luminal.

Arsephenamine and nearsephenamine, which were first made in the United States by the Dermatological Research Laboratories who are now making Bismarsen.

Pantopon, the opium derivative put up by the Hoffman La Roche Company.

Mercurochrome, made by Hynson, Westcott and Dunning.

Liver Extract, made by Lillys.

Hexylresorcinol, S. T. 37, another antiseptic, made by Sharp, Dohme & Co.

If the habit of prescribing patent and non-official proprietary medicines could be eliminated in the hospitals it would go far towards educating the nurses, internes, and even the attending physicians. Due to the multiplicity of drugs and mixtures of drugs put out under as many different names, the average doctor or nurse does not know half the time what is official and what is not.

We cannot begin to talk about the thou-

sands of so-called new drugs that are advertised daily, but I will try to bring up a few that have come to my attention in the hospital pharmacy.

Perhaps you have already noticed that the newer medicines are practically all products of synthetic chemistry. In other words, the history of new discoveries in medicine, as is the case in dyes and other industries, is the history of synthetic chemistry. We will notice a good example of that in the case of the hypnotics.

The hypnotics seem to hold first place in important new remedies, at least as to the number of new preparations put on the market. To cite a few examples and at the same time illustrate the chemical composition:

Somnos, put out by the Mulford Company, is a chemical compound of chloral, called Chloral Glycerolate.

Barbital, introduced into medicine under the name of veronal is di-ethyl-barbituric acid.

Phenobarbital, introduced as luminal, phenyl-di-ethyl-barbituric acid.

Neonal, put out by the Abbott Company, is neo-butyl-ethyl-barbituric acid.

Allonal, put out by Hoffman La Roche, is allyl-iso-propyl-barbituric acid-phenyl-dimethyl-dimethyl-amino-pyrazolon.

Amytal, put out by the Lilly Company, is iso-amyl-barbituric acid.

Ipral, put out by Squibbs, is calcium-ethyl-iso-propyl-barbituric acid.

Dial, put out by the Ciba Company, is diallyl-malonylurea.

Notice that most of them are derivatives more or less of barbituric acid. There are apparently no limits to the combinations that can be obtained.

Some hypnotics are mixtures, not chemical combinations, of two or more other drugs. For example, Pyraminal is a mixture of Pyramidon grains $2\frac{1}{2}$ with Luminal grains $\frac{1}{8}$. This helps to confuse matters as there are hundreds of similar combinations on the market under as many different names. The simple combination of aspirin, phenacetin and caffeine, for instance, is put up by dozens of manufacturers, each one under a different trade name.

Now as to their usefulness and safety. Theoretically, a perfect hypnotic would be one that would produce a natural sleep in a short time with absolutely no after effects,

no injury to heart, lungs, kidneys or other organs, and above all will arouse no craving for the drug, that is, no habit-forming effects. Whether or not any of our hypnotics come up to this standard is a matter for discussion. Some manufacturers claim such advantages more or less for the drug they advertise. I will quote some of the advertisements I have read:

"Neonal is three times more effective than barbital.

It is **practically** non-toxic in **therapeutic** doses. Continued use of the drug does not cause a rash as does the bromides. No **noticeable** action on heart, kidneys or circulation.

Non-narcotic and repeated administration does not **readily** lead to tolerance toward the drug."

Note the lack of positiveness to their statements. In other words, perhaps the drug does lead to habit formation. They say that repeated administration does not **readily** lead to tolerance, which might mean that it does so slowly or gradually.

To quote another example: Squibb's advertisement about Ipral reads:

"Clinical observation has shown no untoward effect upon heart, lung, kidneys or gastro-intestinal tract when administered in therapeutic doses."

Now the question in my mind is what do they mean by a therapeutic dose. What if a tolerance is reached, as in taking morphine, and the patient has to take more and more of the drug to get the same effect? Perhaps then injury will result to heart, kidneys, or lungs. From my own observation, I do know that with quite a few patients at least the so-called non-habit-forming hypnotics when taken over a period of time do have to be taken in larger and larger doses to enable them to obtain the hypnotic effect.

A physician who has an institution for addicts says that Sodium Barbital and Sodium Phenobarbital cause nephritis in that class of patients. In answer to some inquiry about this, the Journal of the A. M. A. has the following:

"Kidney changes have been described in acute barbital poisoning, and it is known that small doses are more dangerous to them than to normal persons. Nevertheless, the danger of nephritis is not sufficiently great to interfere with the **therapeutic** use of these agents."

Notice again how the word "therapeutic" is used. The question is, just what is meant by the therapeutic use and what per cent of these drugs are used therapeutically? Also, besides the danger of nephritis, what other dangers are there? We know that hypnotics lower metabolism. This is, perhaps, to a great extent the secret of their success. If the metabolism is being lowered continually over any period of time, what about the other functions of the body, such as nutrition, elimination and endocrine functions?

Another class of important newer drugs are those used in anemia.

Liver was used empirically by the Chinese thousands of years ago. It has been now proved clinically as almost a specific in the treatment of pernicious anemia. Liver can now be obtained in the form of Liver Extract from the Lilly Company. Fairchild's put it up in some liquid form called Hepcentrate.

Ventriculin, put out by the Parke, Davis and Company, is a substance derived from the stomach tissue of hogs or other animals and contains an anti-anemic factor for the treatment of pernicious anemia. It has been tested clinically in actual anemic cases by the Simpson Memorial Institute, which is a research institute devoted exclusively to the study of pernicious anemia. It has been tested also at the Mayo Clinic and found equal to Liver Extract.

Viosterol is a vegetable oil solution of irradiated ergosterol standardized to a Vitamine D potency 100 times that of Cod Liver oil. The ergosterol was originally derived from ergot, hence its name, but it is now obtained from other sources, mostly yeast. It is subjected to ultra-violet rays which develops in it an anti-rachitic, that is Vitamine D substance. Vigantol, acterol and radiostol are other names under which it has been known. There is also a Viosterol in Cod Liver Oil 5D, that is 5 times the Vitamine D potency of Cod Liver Oil, on the market for the use of those cases where they want the Cod Liver Oil also given.

Internal antiseptics, more or less on the order of hexamethelene, are found among the newer drugs. Whether or not they are of more value, I do not know. Two of the most widely advertised ones are not accepted by the Council on Pharmacy and Chemistry. They are Mallophone and Serenium.

Great claims are made for Mallophone by the Mallinckrodt Company who manufactures it but these claims are apparently not substantiated. On the advertisement it says:

"Mallophone is a penetrating azo dye which imparts its antiseptic properties to the urine. In this way it comes in contact with all the organs or the urinary tract."

There is a note in the A. M. A. Journal regarding Serenium which reads:

"For the claims made the evidence is slight indeed. Squibb and Sons have apparently abandoned so far as this preparation is concerned, the conservatism that has characterized them for nearly three quarters of a century. The advertising by which the physicians are invited to use the product does not present any real proof of merit. There is nothing apparently in medical literature concerning the clinical use of Serenium."

In regards to antiseptics in general, there is really little new in this line. The silver and mercury compounds rank first as they have for many years. However, there are new chemical combinations that are very good. Some of them are the same as argyrol, now official under the name of mild silver protein. Others are similar, as solar-gol, solargentum, protargol, silvol, neo-silvol, and many others. Mercurochrome is perhaps the most important newer mercury combination. Another mercury preparation is Merthiolate 1-1000 put out by Lillys.

Metaphen is a widely advertised antiseptic but its usefulness is under controversy. In a recent article by White and Hill in the A. M. A. Journal we are told that they tried out Metaphen in practical skin tests and found that a dilution of 1-500, which is stronger than that advertised, failed to sterilize the skin in most cases and therefore could not be relied upon to do so.

Neutral Acriflavine is a germicide that can also be used intravenously but its value, too, is doubtful.

Hexylresorcinol S. T. 37 is advertised as 70 times stronger than Carbolic Acid and non-irritating. I have seen no statistics to show how it really works out.

Many antiseptics on the market are modifications of Dakin's Solution and are good as far as they go. Good examples of them are Chlorazene and Hychlorite. Zonite is also a Dakin's Modification, but it does not

say so on the label and advertises as if it were a most powerful germicide and even a cure-all.

One thousand products, mostly antiseptics, were examined by the United States Department of Agriculture, and the firms making them were advised to label their products truthfully. Most of them revised their labels or changed their formulas to conform to the label (I suppose whichever method was cheaper) to justify the claims made, but forty-five antiseptics were taken off the market rather than face legal action under the Federal Food and Drug Act.

Cinchophen, now official under the name of Phenylcinchoninic Acid is not one of the newest drugs, but there has been so much new said about it lately and so many new combinations on the market that it deserves a place here. The drug was introduced into therapeutics in 1908 under the name of "Atophan." At that time it was accepted quite generally by the medical profession as an efficient uric acid eliminant. Later the drug lost prestige for this purpose. However, it was found to be an effective analgesic, much like the salicylates. In 1923 evidence became available that this supposed harmless drug was causing fatal hepatitis, according to articles published in the *Journal of the American Medical Association*. Thus we see how the score or more of proprietary preparations containing cinchophen may become harmful when they pass into the hands of those who are practicing self-medication. The incident illustrates the importance of enacting laws to forbid the sale of nostrums, that is, preparations that do not declare the active ingredients on the label, for in this way the consumer has some protection and is not at the mercy of the unscrupulous exploiter.

It is startling to reflect that if it took fifteen years to learn, definitely, of the mischievous effects of cinchophen, what may be the final verdict as regards many other popular drugs, such as the barbituric acid derivatives.

There are two important vaso-constrictors on the market, similar to epinephrine in action but with a wider range of usefulness. They are Ephedrine and Synephrine.

Ephedrine is similar to epinephrine in chemical composition. It is an alkaloid of the Chinese plant *Ma Huang*. Although it is new to us the Chinese have used it for five thousand years. It can now be ob-

tained in the form of inhalant, powder, tablets, capsules and ampuls.

Synephrine is less toxic than epinephrine or ephedrine. It is a synthetic alkaloid. Its vaso-constrictor action endures longer than epinephrine or ephedrine. It was accepted by the Council on Pharmacy and Chemistry, May, 1930.

There are two new cardio-respiratory stimulants accepted by the Council that are the products of synthetic chemistry.

Coramine, put out by the Ciba Company.

Metrazol, put out by the Bilhuber-Knoll Corporation.

Gnyergen is a new Ergot preparation put out by the Sandoz Company. Chemically it is Ergotamine Tartrate. It can be given intramuscularly without irritation and has been accepted by the Council.

Two new diuretics that have come to my attention are:

Metaphyllin, known in Europe as Euphyllin.

Salyrgan, also sold under the name of Mersayl.

Among the heart stimulants, digitalis still holds first place. There are many new preparations on the market but all are obtained from the same source, the digitalis leaf. Some of the names we hear are, Digalen, Digifoline, Digiglusin, Digitora, Digitan, Digitol, etc.

Under the arsephenamines we have two new forms that can be given intramuscularly, which is a great advantage, especially in treating children or others whose veins are small. Sulpharsephenamine is one form and Bismarsen, or Bismuth Sulpharsephenamine is the other. They have already been clinically proved as most effective.

BOTANICAL GARDEN

We note with interest that Albert S. Ingalls, father of Assistant Secretary of the Navy, David S. Ingalls, who is owner of the **Bath County Enterprise**, a paper published in Warm Springs, Virginia, recently devoted a column to our medicinal plant garden at **The Squire Vallevue**. Commendatory remarks were made on the scope, purpose and results of the undertaking.



A. L. FLANDERMEYER

**President of the Academy of Pharmacy and
Member of the Ohio State Board of Pharmacy**

ACADEMY OF PHARMACY

The Northern Ohio Branch of the American Pharmaceutical Association has recently changed its name to read

THE ACADEMY OF PHARMACY and

The Northern Ohio Branch of The American Pharmaceutical Association

Hereafter, outside of official communications, it will be known simply as the Academy of Pharmacy. It has started in the new year very auspiciously by sending out a series of bulletins to more than 1500 physicians. These bulletins comprise short and pointed talks to the medical profession. They set forth the advantages that are bound to accrue to all concerned if professional pharmacy, as vouched for by the Academy of Pharmacy, is taken into the confidence of both the doctor and his patient.

The titles of Bulletins so far issued are as follows:

Bulletin 1—1931: What is the Academy of Pharmacy?

Bulletin 2—1931: Some Ethical Principles.

Bulletin 3—1931: Is a Prescription Necessary?

Bulletin 4—1931: Aspirin-Luminal.

Bulletin 5—1931: A Physician's Service Sold to the Lowest Bidder.

Bulletin 6—1931: It Takes Real Prescriptions to Make an Ethical Prescription Pharmacy.

Bulletin 1—1932: Cough Syrup and Expectorant Mixture.

Bulletin 2—1932: Your Patient's Confidence.

Bulletin 3—1932: The Modern Pharmacist is Competent.

Bulletin 4—1932: Help Eliminate Proprieties.

The officers of the Academy of Pharmacy for the year 1932 are:

PresidentA. L. Flandermeier
Vice President....Emil Petersilge
Secretary.....F. J. Bacon
Treasurer.....Herbert Decker

Members of Council

Terms expiring January, 1933—

A. L. Flandermeier
Paul R. Hudson
George Miller
Edward Spease

Terms expiring January, 1934—

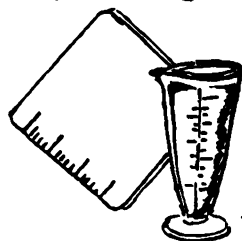
Herbert Decker
Emil Petersilge
Nelson E. Scribner
Andrew E. Walleck

Terms expiring January, 1935—

F. J. Bacon
N. T. Chamberlin
A. P. Gegenheimer
Alex Steiner

Terms expiring January, 1936—

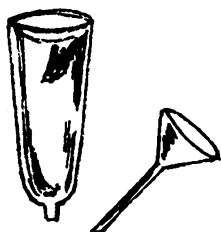
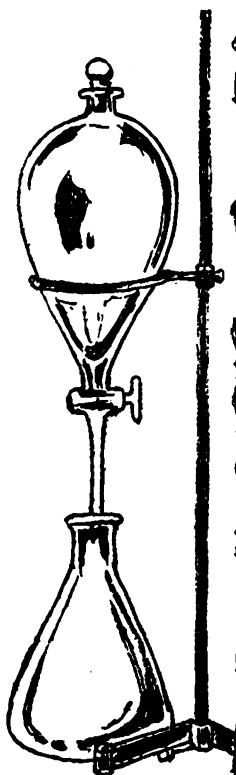
H. E. Benfield
E. D. Davy
F. W. Gehrung
H. E. Speer



Greetings to the Academy of Pharmacy



Pharmacy is indeed beginning to find itself when such a group of prominent professional men are willing to devote their combined earnest efforts to the elevation of their profession. We are watching you anxiously, for upon organizations such as yours rests the fate of the future of Pharmacy. The School of Pharmacy is proud to be affiliated with your Association and will gladly assist you whenever possible. Our library and staff are ready to serve you and the physicians of our community. Our student organizations will gladly cooperate with you at all times. The Pharmacopoeia is at your disposal. We are proud of you and we are watching you.



Good Luck.



THE WRITING OF A SCIENTIFIC BIBLIOGRAPHY

By Lawrence H. Baldinger, M. S.
Class of 1929

(EDITOR'S NOTE:—Mr. Baldinger is a member of the Faculty of the Department of Pharmacy, University of Notre Dame, Notre Dame, Indiana.)

Quite often the undergraduate has need of information relative to the compilation and writing of a bibliography for scientific reports, elementary theses, or class duties. Too often the student is placed upon his own resources and responsibility in the writing of these reports and in the grouping of these references, with the result that in many cases the body of the report is presented in excellent style while the bibliography is poorly assembled. It is hoped that this paper will pass along to the undergraduate, especially to those interested in the writing of scientific reports, a few pointers relative to literature research and to the writing of a suitable bibliography for the report.

Every scientific contribution¹ should have as a concluding section a bibliography containing a partial or complete list of references which the writer has found to bear directly on the thesis problem. In addition to being a justification of one's work, the bibliography² is expected to give due credit to those whose work he is quoting and to aid others who may be interested in the problem to secure material on it with a minimum expenditure of time and effort. Therefore, the writer should not be afraid of appearing pedantic by supplying in full and with absolute accuracy all necessary bibliographical data for each reference.

The position of the bibliography in a scientific report is optional, usually, however, appearing as the concluding section. A few writers prefer to make the bibliography the first section of their manuscript. Still others place at the bottom of each page, the bibliography for that particular page. Any one of the three is correct but it is understood that the writer should be consistent throughout his report in the matter of grouping references.

Bibliographies¹ may be either partial or complete. In the latter case, everything

found relative to the subject is included, while in the former case some limitation is set in the compilation. In the usual bibliography³ part or all of the following information is given for each entry: author's name; title of publication; some statement, in addition to the title, indicating the exact location in the publication of the material cited (this includes for a book, the volume, page, and year, or number of the edition; for the patent, the name of the country issuing the patent, the number, and the date; for the public document, the name of the division issuing the document, together with the proper designation, number, and date; and for the journal article, the title of the article, series, volume, page, and year); and an annotation indicating the nature of the material to be found in the source to which reference is made. If the bibliography is a separate publication, all of the above information is included. Regardless of the part of the above data given, whatever is given is spoken of as a reference.

A bibliography is essentially only a list of references, with no specification regarding the arrangement of the separate entries in the list. Although it is far better to have a poorly arranged list than none at all, it is well worth the extra time and effort required to put the references in a well-arranged form. For most bibliographies⁴ one of the following schemes may be followed in listing references:

1. According to the order in which the references are mentioned in the body of the report.⁵ Each entry includes the name of the author and data for locating the material to which reference is made.
2. Alphabetically according to the name or title of the publication containing the contributions. This is one of the least satisfactory schemes but it may be used when the authors' names are omitted.
3. Chronologically. This scheme may be desirable in some cases, especially if the time of the publication of the contribution is an important point. It will serve also to indicate the historical development of the subject. The various references occurring under the same year may be given a serial number. They may also be arranged alphabetically by authors under each year or

may be arranged alphabetically by authors without any attention being given to yearly sequence.⁶

4. Alphabetically by authors. The following three variations in this kind of arrangement may be mentioned:

- (a) A simple alphabetical list is made with or without a serial number for each entry. This is satisfactory for short lists but not when the number of references is large.⁷
- (b) The arrangement is the same as in (a) including the serial number but with the addition of a comprehensive subject index, prepared on the basis of the material contained in each entry, and so arranged that the numbers under any given subject indicate the serial numbers of the references in which the subject is treated.
- (c) The references are first classified, some arrangement as the following being used; according to the nature of the publication in which the references occur, as periodicals, public documents, patents, and books; according to some special viewpoint of the author; or according to the natural subdivisions of the subject with which they deal. They may or may not be numbered.⁸

The writing of this article was undertaken with the sole purpose of giving to the young scientific reporter a few hints and suggestions for making citations to the literature, which are often given carelessly with regard to abbreviations, punctuations, names of authors, etc. It should be remembered that errors in references are less likely to be detected by the proof reader than in ordinary reading matter; hence all references should be perfectly clear, well punctuated, and checked for proper abbreviations. Although the writer has deviated somewhat from his original purpose in the preceding discussion, it is hoped that the suggestions given there will be of some help.

Every few years *Chemical Abstracts* publishes a list of periodicals abstracted with a key to library files, which list is a great help in locating journals of chemical interest, also in making proper abbreviations of the journals when citing references contained in

them. The latest list, thoroughly revised, appeared as part of the November 20, 1931, number of *Chemical Abstracts*. The journal name abbreviations shown in the list have standing as international standards by reason of action taken by the International Union of Chemistry several years ago. In this list the entire name of the journal appears along with other data, but the part of the word or words used as abbreviations for the journal name are in bold type. As an example let us consider the journal, *Bulletin de la société de chimie de France*," in which the letters, "**Bull. soc. chim.**" are in bold type, thereby showing the proper abbreviation for that journal. If the author's name precedes the journal reference, the two are separated by a colon, although some authors prefer to use a comma. Following the journal name is the volume number of the journal in bold type, the page, and last, in parentheses, the year. The use of parentheses eliminates the possibility of mistaking the year for a page number. If more than one reference appears in the same volume under the same author's name, the different page numbers are separated by a comma. If several authors have contributions in the same journal, but in different volumes, we list each reference separately but do not repeat the name of the journal each time, substituting for it in each reference after the first, the word, "*Ibid.*," the abbreviation for, "*ibidem*," which translated means, "*in the same place*." These are only a few of the great many points which must be kept in mind. To attempt to enumerate all of the fine points of writing a bibliography would be an impossibility in a paper of this length, hence the writer has given numerous references to books, periodicals and pamphlets which have proved useful in writing this report and others of different natures. There seems to be no set method among American chemists for handling references, hence the need of uniformity in bibliographical notation. Mellon,⁹ in expressing his opinion on the matter, offers some very good suggestions with regard to the listing of references. Crane and Patterson,¹⁰ in their book, "*The Literature of Chemistry*," give excellent advice to both young and old writers. Their lists of periodicals, abbreviations, symbols, libraries, and organizations are especially helpful to those just venturing into the field of scientific writing. E. D. Merrill¹¹ makes a plea for a simplified form and

directs his plea to publishers, editors, and members of editorial staffs, stating that the initiative must be taken by them, otherwise the individual author is powerless in the matter.

Goldthwaite¹² offers some encouragement in stating that the system of citations employed by *Chemical Abstracts* is probably the most carefully worked out of any in use and is rapidly becoming recognized as a model.

Furfey,¹³ in commenting on poor literature citations, mentions a few faults found in a random sampling of chemical literature. Although the article is a sharp criticism of several writers and their style, nevertheless, it contains some excellent advice for writing a bibliography.

A few words and general references might be given at this time relative to searching the literature and to writing the report. F. H. Norton,¹⁴ in an article, "*The Art of Writing Scientific Reports*," presents simply but forcefully the need of clarity, confidence, integrity, unity, and coherence in the writing of articles. Cade¹⁵ gives an annotated list of references on the sources of information available to the seeker of data. This list, although not necessarily complete as to every article published on the subject, nevertheless contains references to important and useful contributions. Hibbert,¹⁶ Crane,¹⁷ and Patterson¹⁸ all offer excellent advice as to the proper procedure for searching the literature, and indirectly offer many good points with regard to literature citations.

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¹⁸Patterson: Ibid., 11, 989 (1919)

DR. BACON ATTENDS THE ANNUAL MEETING OF THE ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AT NEW ORLEANS

Dr. F. J. Bacon of the Faculty, with his family, motored into the sunny South during the Christmas vacation period. His first extended stop was at the home of Dr. George Weber of the University of Florida Faculty, Gainesville, Florida. Dr. Weber is Plant Pathologist for the State of Florida. Dr. Bacon was formerly a member of the Faculty of the University of Florida and took advantage of his few days stay in Gainesville to renew old acquaintances. He had the opportunity of visiting the new pharmacy building, which has recently been erected.

The trip was then continued to New Orleans in company with Dr. Weber's family. At the latter city, most of their available time was given over to meetings of the Association for the Advancement of Science which meets annually in some large American city. It will be recalled that last year's meeting was held in Cleveland.

Dr. Bacon's primary interest was in the meetings of the Society of Plant Physiologists, but he also found time to visit the Louisiana State Medical School and the Tulane University School of Pharmacy. The trip home was made direct from New Orleans.

PROFESSOR BACON ADDRESSES THE PASTEUR CLUB

Dr. F. J. Bacon, Professor of Pharmacognosy, recently addressed the Pasteur Club on the activities of the School of Pharmacy's Medicinal Plant Garden at The Squire Valleeue.

The Pasteur Club was founded in 1918. It has monthly meetings at the Union Club eight months in the year. At the present time there are fifty-five members, mostly physicians, with others interested in the various works of Pasteur who was one of the outstanding scientists of all time. He was not a physician, but his contribution to the world's knowledge affected the trend of medical practice probably as much, if not more, than those of any other man in history.

STUDENT BRANCH OF THE A. PH. A.

The Student Branch of the American Pharmaceutical Association held a joint meeting with the Academy of Pharmacy and the Northern Ohio Branch of the American Pharmaceutical Association on the evening of January 8, 1932. Dean C. B. Jordan of the School of Pharmacy of Purdue University addressed the meeting, speaking on "Some Aspects of Professional Pharmacy."

Dean Jordan has recently made a survey of professional pharmacy in the United States and much of his talk had to do with phases of this survey. A professional pharmacy was arbitrarily defined as "any drug store the sales of which from prescription compounding and filling doctors' orders amounts to fifty per cent or more of the total sales of the store." The shortcomings of such a definition were recognized by Dr. Jordan, but that seems to be the best that can be formulated at the present time. There appear to be 353 such stores in the United States today, and the great majority of these have grown up during the last decade, which is significant from the viewpoint of professional pharmacy. Dr. Jordan highly commended the efforts of the newly formed Cleveland Academy of Pharmacy in its attempt to separate "the sheep from the goats" in the field of professional pharmacy. Dr. Jordan proved to be an entertaining speaker; his information on the subject was well marshalled and ably presented in such a way as to highly impress all who heard him.

COUNCILMEN PHARMACISTS

Two pharmacists are now members of Cleveland's City Council. Anthony B. Ejbl and Walter Hagemeister were regularly inducted as City fathers at the beginning of the year. Both men are widely known among their professional brethren in the city, having taken prominent parts in pharmaceutical activities for a number of years.

Mr. Ejbl is an alumnus of the School, having graduated in 1905 and entered business the following year. He is at present First Vice-President of the Ohio State Pharmaceutical Association and has been for several years Chairman of its important

Committee on Trade Interests. He is a past president of the Northern Ohio Druggist's Association.

Mr. Hagemeister, a former student of the School and a native of Cleveland, has been in the drug business for more than twenty years, nearly half of which he has been in business for himself. He has taken an active part in association work both in the State and City.

IMPORTANCE OF CLEANLINESS

Henry Ford's advice to those seeking a successful business career is to bear in mind five cardinal points. These, says Mr. Ford, whose own success qualifies him as an adviser, are cleanliness, investigation, putting to use what you already have, belief in your own ability to accomplish what you set out to do and knowing how to spend money.

"The first advice I would give to any man," Mr. Ford said recently, "is to keep himself and everything around him clean. If he is able to do this he is one in a thousand. The importance of neatness, cleanliness and orderliness is due to the fact that they have a great effect on the way a man's mind works. The man who keeps himself and all his tools clean is apt to do things well."

HOSPITAL PHARMACISTS ORGANIZE

Starting several years ago with five members, the Hospital Pharmacists' Association of Southern California is now a flourishing organization with an active membership of forty and an associate membership of nearly that number. Meetings are held monthly at the various hospitals represented by the membership and the lectures and addresses delivered on these occasions are especially valuable. The speakers include physicians, pharmacists and representatives of the larger manufacturing houses associated with pharmacy, who are frequently invited to discuss new products and their uses, as well as interesting phases of manufacturing.

WHY JOIN A FRATERNITY?

By Anonymous

Every year some three thousand young men matriculate at our colleges of pharmacy to begin their preparation for their life work. First days at college are similar to first days at high school. To the newcomer all is new and he is excited, though his excitement may show itself in a manner peculiar to his temperament. To some, going to college means just a beginning of a three or four year period of study—to others it is a most important step in life, this task of training for a profession.

When on the first day these newcomers arrive at college and, more sensitive to impressions than can be imagined, "take in" as much as they can. They, too, are being "taken in" though they may not be aware of it. Fraters of all the fraternal organizations, student members, even alumni members are on the job—observing, commenting on, "sizing up" the newcomers as prospective material for their respective fraternities. John (as we shall refer to our newcomer) has heard quite a bit, from the members about the respective fraternities. He is aware that he is being rushed—and unless he has been influenced by some frater prior to coming to college, he assumes a somewhat hesitant or defensive attitude, wants to know more of what it is all about so that he may decide two questions for himself: First—Should he accept invitation to membership in any of the fraternities? Second—If so, which one?

The answers to both these questions are governed by a third question: Why should he? It is here that the fraternities need be explanatory and circumspect. They are on the defensive. They have been advertising and now they must become salesmen for themselves. Just what have they to offer to our John? Why should John join this, that, or any fraternity? Why?

Certainly membership in a fraternity cannot guarantee him passing grades nor make him a favorite with the professors. If anything, the professors will expect more of him. In fact, membership in any of the fraternities will place John in a more responsible position—he will be more particularly observed and judged, just as he observed and judged the rushing fraters.

To the outsider, a fraternity oftentimes seems merely an opportunity or excuse for

social contacts, dances, parties . . . or for attaining a position of vain aloofness. True, some fraternities are purely social; but in pharmacy there are others which are fundamentally and truly professional and which, by their lessons, oaths, and secret work, seek to inculcate a love and respect for the profession. Fraternities seek to elevate the profession and its followers because their leaders realize that it is the John of today who will be the pharmacist of tomorrow, and that pharmacy of tomorrow will be no better than the pharmacist of tomorrow.

Who are the members of the fraternity? Practically every prominent leader in pharmacy is a member of one of the professional pharmaceutical fraternities and delights in his fratership. Some of the more prominent are national officers in their organization. If, despite their many private and professional duties, they can devote their time and energy to fraternal work, they must deem it a worth while service.

What do fraternities expect of John? Many people—and our Johns—would think first of dues. It is true that fraternities as well as other active organizations need money. Dues are not excessive. They are a very small part of what is expected of John. Most fraternities have high ideals. Worth while ideals—ideals upon which fraternities are founded—ideals that enable them to grow—ideals that will help, stimulate, and elevate all those that strive for them—ideals worthy of emulation and perpetuation. These ideals they expect to typify, exemplify and perpetuate.

Of course, John will naturally regard with pride his fraternity and its more intimate contacts. But disregarding this feature in the weighing, will it be worth while for him to be pledged and join such a fraternity? It certainly will.

To the fraternity men.

Our Johns at some time or other all wonder: Why join a fraternity? Show them how worth while fratership can be.

Where the Shoe Pinches, or What Is the Trouble with Distribution is the title of an interesting article recently published by Dr. Paul H. Nystrom, Professor of Marketing, School of Business, Columbia University.

In this article high pressured salesmanship comes in for its full share of criticism for having been one of the big contributing

factors in our present business disturbance. Recent studies among consumers, it is claimed, confirm the impression that there is a steadily growing public irritation towards business in general and retailers in particular. Such fanciful claims have been made in advertising that the public is well-nigh "fed-up." Truthful publicity—absence of weasel words and over-drawn word pictures—are urgently called for. Public confidence must be restored. The public has been "sold" too much—or anyway it has paid too much for what it got.

Another point emphasized by the author regards the matter of accounting. Although detailed expense accounting has been elaborately developed, cost accounting has been neglected. While it is true that detailed cost accounting has been found quite impracticable in wholesale and retail establishments, some system should be used in order to make various classes of items bear their true "expense rate depending upon the amount and kind of space occupied, rate of turnover, care required, depreciation, and other losses suffered, sales and other promotion effort needed, capital invested and so on." In other words, "costs" must be lowered to the extent that each class of goods pays its full share of overhead. Personnel services must be so distributed as to justify whatever equitable salaries are paid.

Selected Editorial

GOOD TASTE IN BUSINESS

A local news item recently printed informed that because of the complaint of a high school principal, one of the police prosecutors had warned two retail druggists against the sale of booklets containing contraceptive information. The principal complained that some of his pupils had bought the pamphlets. The facts in the matter as developed showed that while some of the pamphlets had been displayed on a counter in one of the stores, that if some minors had them, they had gotten them not by purchase, and without the knowledge of the druggist. Since the state law specifically permits "druggists in their legitimate business" to impart such information, there is no legal point involved in the incident. It

does, however, prompt reflection of the considerable part which good taste plays in all business and particularly of the necessity for it in the successful conduct of a retail drug store.

Some would deny that this is so. They would say that in business, good taste has no more value than have good looks. Not a handicap, but of no perceptible benefit.

Yet good taste is one of the manifestations of the sense of beauty, and that beauty nowadays has commercial value is best evidenced in the advertising pages of our most popular periodicals.

Note how the demand for beauty of color or of line is catered to in the manufacture and sale of articles as purely utilitarian, as for example, automobiles, stoves, refrigerators and bathtubs. Advertising and merchandising experts emphasize that to find a market, an article, any article, must be attractive.

The people of this generation look better, dress better, are more fastidious in what they will use or wear or eat than they ever have been in this blessed land. And it does not seem likely, does it, that a generation which so abundantly proves growing discrimination and good taste in things will be insensitive or indifferent to beauty and good taste in the realm of thought and feeling? Or that it will resent bad taste in conduct less quickly than it will punish ugliness in things? The amusement industry can most readily corroborate the fact that people are not insensitive or indifferent in this regard.

And what has all this to do with the retail drug business? Only this. Druggists function as merchants most of the time; as professional men, some of the time. Broadly speaking, merchants sell whatever people will buy without much regard as to whether or not it fills a real need. Professional men render a definitely needed service competently and conscientiously. Again, broadly speaking, merchandising requires noise and exaggeration while important attributes of good professional service are just the opposite. Druggists, therefore, who alternately have to function in both capacities must be especially careful that they do not allow merchandising methods to dominate the professional phase of their business, lest they be betrayed into lapses of good judgment and of good taste.

—From *Northern Ohio Druggist*.

ANNUAL DANCE

Pleasant memories of an enjoyable dinner dance at Pine Ridge Country Club last June will cause many an Alumni to look forward to the graduation dance this year. A good dinner, wonderful music, souvenirs, prizes and a good time was enjoyed by every one present.

Monday, February 8th, 8:30 P. M., the Student Council-Alumni combined dance will be held in the ballroom of Winton Hotel. Toe tickling music by Ed Day and his Ten Knights will be featured. Prizes, entertainment, refreshments and surprises galore.

The Student Council and the Alumni Association have combined to give you the greatest dance in the history of pharmacy (an old history).

The Student Body and the Faculty will attend en masse. Alumni, we want you there! Come and meet old friends and make new ones. Put yourselves in the hands of a committee and forget all your troubles. So come and join the fun.

The Committee,
Gustav C. Kostell, Chairman.

FAVORS DISPLAY OF PHARMACIST'S NAME

W. B. Philip Believes Independent Proprietor Should Emphasize Personal Element Wherever Possible

W. Bruce Philip, Secretary of the Retail Druggists Association of San Francisco, believes that the name of the pharmacist-proprietor should, whenever practical, occupy a prominent position on the window of his store. Commenting upon this policy in a recent issue of his Weekly Information Letter, Mr. Philip says:

"Why not capitalize your own name and let the people of your neighborhood know by every possible means who is the person with whom they are dealing. Let the public know who is the scientifically trained man in the store who safeguards the lives of the members of their family. The inde-

pendent retail druggist has a very great advantage over the non-personal chain in the use of his individual name and his personality. Why not take advantage of the opportunity? Appreciate the value of your name. Make it pay dividends. Make it build you a reputation in the community where you are doing business on a real service basis.

"Put your name on the front of your store. If for any reason you have or prefer to keep your fanciful name for your drug store place your own name in good-sized letters some place in sight so that the public will know that the 'City Drug Store' in your particular town is owned by you, a registered pharmacist, John Smith."

In some states the pharmacy law makes it obligatory that the name of the proprietor be displayed.

HOSPITAL PHARMACIES

Hospitals are justified in dispensing pharmaceuticals to their own clientele only, is the conclusion reached by the Editor of **The Modern Hospital** and expressed in the December, 1931, issue.

It is apparent that the Editor, if not a "cagy" man, is certainly a believer in a policy of expediency, for he says—"The hospital should compare carefully the financial gain that accrues as a result of the conduct of its pharmacy with the loss in confidence and good feeling as well as in contributions that sometimes follow when business men feel that the hospital is not playing fair with them."

R

Terror of Life

Life promises so much—
And breaks the promise!
Life raises up
Our fated hopes so high!
Life never pays for what
It snatches from us;
Life mocks us
When we die.
Yet that is not
What makes me sad and weepy;
This is what makes my days
Not worth a damn—
I have to go to bed
When I'm not sleepy
And get up
When I am!

—Plain Dealer.

The Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

Editor -----	GEORGE GERLACH, '32	Art Editor -----	BERNARD SPITZ, '33
Associate Editor -----	BERTHA GROSSER, '32	Business Manager -----	TED GUTKOWSKI, '34
	Faculty Adviser -----	PROF. N. T. CHAMBERLIN	

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Emory Sobonya, '34	Norman Fretthold, '35
Edward Hemmeter, '33	Roger Marquand, '35

BUSINESS

Karl Schweickardt, '32	John Obester, '32
Michael G. Girbino, '32	Vera Sonich, '35

Vol. 6

WESTERN RESERVE SCHOOL OF PHARMACY

No. 1

Cleveland, Ohio

January, 1932

EDITORIALS

PHARMACON

Do you remember the "big kick" you received from your annual when you graduated from high school? High school annuals are usually inviting volumes full of pleasant recollections, personal memories collected in book form to serve as a permanent record of four short years well spent. True, we are no longer in high school, but don't you think our PHARMACON annual issue would be much more inviting if we could make it a bit more personal and thus make it somewhat more than merely a book of photographs and technical treatises?

Sketches and skits, poetry and puns, snapshots and jokes, memories and prophecies, and, perhaps, a bit of romance, all would help to create a very creditable year-book. But we cannot do much without money and our budget fund is limited. We cannot, under any circumstances, charge you anything for this book. There is a way out, however, a way which requires cooperation and enthusiasm. The key to the solution lies in our advertisements. If every member of the junior and senior classes will assist in getting "ads" for the annual we can work wonders. We have in these two classes a group of salesmen and salesladies with years of experience. We've sold countless boxes of candy, cosmetics, kodaks, patent medicines, and what not. It would not require much energy to sell an ad, just one apiece would help for the

sake of the PHARMACON. If you will all help, your staff can give you a wonderful annual. If you do not wish to cooperate because of personal prejudices, the Editor will gladly permit some competent person of your own choosing to take charge. We want a real PHARMACON, a publication to which you can point with pride. It takes school spirit to do this, surely you have a little of that very thing left in you. Some few students devote a great many hours every week to the thankless work of editing the PHARMACON. It's your paper, aren't you willing to devote half an hour to improve it? Talk is cheap and censure requires no effort. Encouragement, too, is cheap and active support requires but little effort.

This is neither a plea nor a petition. It is merely a proposition. With your cooperation we can make your last PHARMACON a beautiful memento of your college days. Without your sincere support we can do little and you need not expect very much. This attitude of, "How many honor points will I get for two ads?" will not work. You'll get none. If you aren't willing to help for the sake of helping, if you aren't willing to put yourself out a little bit for the general good, you do not belong here. We sha'n't beg you for help. We want to improve the PHARMACON. We want a real PHARMACON annual. Do you? Then how about lending a hand?

NOISE

If you have never walked through the library of the School of Pharmacy at noon, or through the corridors of Adelbert Hall between morning classes, you do not know what the word "noise" means.

Wherever Pharmacy students congregate, they are immediately recognized by the ungodly racket which accompanies their assemblage. We are known all over the campus as the noisiest and friendliest group in the University. Aren't we ashamed of ourselves? No, not in the least. Noise is usually a sign of happiness, sometimes anger, seldom unhappiness or grief. We have here in our School a group of approximately one hundred students. Everybody here knows everybody else quite well and we are all on fairly intimate terms with each other. Practically all of us are working our way through school. Many of us spend all the time when we are not in school working in drug stores. School and work are both very serious forms of livelihood and allow little if any time for wholesome recreation of any sort. We are all very young yet and cannot always be serious. All this pent-up energy of ours must seek expression in some form or other and usually manifests itself in the form of animated conversation, noisy laughter, friendly arguments and often just plain "racket." It is somewhat disturbing for any one who wishes to study at noon to have a dozen shouting students around him. It is very disconcerting to attempt to compile a bibliography or write a theme with such a hubbub about one. Undoubtedly it is also inconsiderate of our Dean and his office staff. In fact we have all seen spontaneous eruptions of denunciation by the powers that be when the discussions become rather heated in the library. You see, they have locked up our library books so now we cannot even pretend we go in there to read. We congregate there because we pharmacy students have no other place to meet. A few years ago we had a locker-room in Adelbert Hall, but that was converted into a chemistry laboratory. We cannot meet in Eldred Hall because it is always crowded with Adelbert College students and we just "do not belong." It might be a good suggestion to replace the doors leading into the old stock-room and put a few tables and chairs in there so that the men could smoke and chat and do as they pleased. Our young ladies have a rest room of their own, why shouldn't the men, who outnumber them ten to one, receive some consideration? We want a place to meet and talk and,

perhaps, play cards. If we do not get one, the pharmacy school is going to retain its reputation of having the noisiest group of students on the campus. We all mean well, and certainly know that we often act in an ungentlemanly manner. We have frequently been inconsiderate and even discourteous in this respect in the past, and though we may be very sorry, you cannot expect to see the situation remedied unless the School cooperates with our men by giving them a place to meet where they may just act natural once in a while between classes throughout the day.

ALUMNI ASSOCIATION

Just one year ago, the student body of our School apparently voted in Assembly to join the Alumni Association one hundred per cent upon graduation. That is, each graduating student was to be assessed five dollars (\$5.00) for life membership in the Alumni Association. The manner in which this vote was taken was not quite satisfactory to everyone concerned and as a result, some of last year's graduates still bear a grudge against the Alumni Association and this feeling of antagonism was not diminished in the least by the determination of our Registrar not to send out grades until the \$5.00 fee was paid. It might prove good diplomacy if one of the alumni executives were to go to the office and request that these grades be mailed at once. A number of gentlemen are still waiting for their June reports.

No one can dispute the value of an active Alumni Association. We have all respectfully scrutinized certificates of membership in the Alumni Association of the Philadelphia College of Pharmacy which one occasionally sees in drug stores. Our School is recognized as being one of the finest professional pharmacy schools in the country and our Alumni Association is fast becoming equally prominent. Everyone of us will some day belong to this Association and we want the connection to be one of which we may be proud. The Association is at present fortunate in having a capable group of enthusiastic officers who are to be highly complimented for the work they are doing.

Our coming Student Council Dance held jointly with the Alumni Association and financed by both organizations was arranged in an effort to create and promote friendly con-

tacts between the students and alumni. We have secured the services of one of Cleveland's best bands and have obtained one of the city's finest ballrooms for the affair. The evening promises to be a very pleasant one and will be a very lively one also, full of stunts and surprises for everyone. If you like to dance, here's an opportunity to do so within a group of your own schoolmates and brother pharmacists. If you do not dance, there will be enough action to keep you from becoming bored at any time. There will be gay music, laughter, refreshments, and everything necessary for a real good time. Best of all, it's free to students. It's your dance, come and have a good time with us.

CRITICS

"Why don't you do this and that instead of so and so?" "That's terrible." "Why not start this or that," etc. Haven't you heard such remarks time and again in connection with school affairs and activities? You have and always will. Our School has always had a few, sometimes quite a few, students who go about criticising everything that is ever done. They are full of satirical comments and advice; they are very generous with destructive criticisms; they are always ready to knock and belittle another person's efforts.

The PHARMACON has long borne the brunt of such attacks. Our Student Council, athletic tournaments, honor systems, annual dance, practically all of our School organizations and activities receive their share of vituperation. As a rule, our severest critics are of the indolent, cocksure, intellectually sub-mediocre, ungrateful and unprogressive type. This type of parasite seldom holds the reins of any project because he is not dependable enough to be trusted with the responsibilities of the position. Instead of helping to improve existing conditions he balks those who are attempting to do so. His censures are prolific, but his contributions are terrific. We all invite constructive criticism because we need it. When we blunder, tell us how we may improve ourselves and help us to do our best, particularly in projects which concern the student body. If you can do better, if you have demonstrated that you are more capable, and can be trusted and depended upon, you will be permitted to try your hand. Unless

you are willing to help personally, unless you have meritorious contributions to make toward the government of school affairs, unless you are willing to take upon yourself some of the thankless work which always receives the direst criticism, for goodness' sake keep your mouth shut or go into the woods in Wade Park and talk to yourself.

INCLUDE DEPRECIATION WITH OPERATING COST

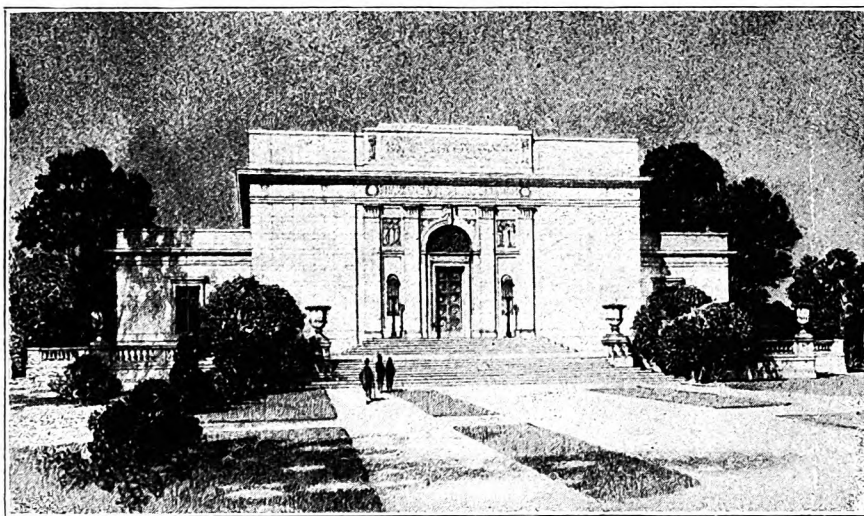
Pharmacist Should Estimate Value of Store Equipment Each Year

What value to place upon the fixtures and equipment of his store is often a puzzling question to the pharmacist. He may be contemplating a sale or may wish to list them in his store inventory.

"Depreciation is a legitimate operating cost," states the Druggists' Research Bureau, "which the government permits a druggist to deduct in making his income tax return. For instance, you buy today a new show case, for which you pay \$450. At the end of 15 years you anticipate that this show case will be in such bad shape or so out of date that you will have to replace it. The case thus loses one-fifteenth of its value each year it is in the store, and this \$30 is a very real operating cost.

"The way to calculate the amount of depreciation to be charged each year is to set down the original cost of each item of equipment and fixtures, and alongside of it an estimate of the number of years you expect to use each one. By dividing this into the original cost you get for each item the annual amount of depreciation.

"Practically speaking, the way to calculate depreciation for all of the fixtures and equipment in the store is to make an itemized list of them, putting in one column the original cost and in the second column the number of years you expect to use them. By dividing the figure in the second column into the amount in the first column you get the annual amount of depreciation to be charged against each item of fixtures and equipment, and the total of all of them is the total amount of depreciation to be charged."



This is the front view of the proposed Pharmacy Headquarters Building in Washington, D. C. Officers of the A. Ph. A. have approved final plans and it is expected that the imposing building will be completed before the close of 1932.

FRATERNITIES

RHO CHI NEWS

An interesting lecture on the origin, growth and aim of Rho Chi Society was recently delivered in an Assembly by Robert M. Porter, President of Sigma Chapter. Rho Chi, as you all know, is the Phi Beta Kappa of Pharmacy. Its scholastic requirements are parallel to those of Phi Beta Kappa and it is the only National Honorary Pharmaceutical Society in the United States.

We have a few Rho Chi men in our ranks at present and hope to add a few more this spring. A new school semester has just begun. We all have a clean slate now. Let's keep it that way and see if we can't study a little more conscientiously than we have in the past. If you aren't doing your best, you're lazy or a quitter. If you're either, you probably will not be interested in Rho Chi. If you're a real student you'll look up to Rho Chi, accept its challenge and will not be satisfied until you wear the coveted key. Rho Chi needs capable young pharmacy students. Are you man enough to make it?

KAPPA PSI NEWS

Here is another year begun and interesting forecasts for the future being broadcast from all sources. "May success and prosperity come to all of our friends," that is the New Year's wish of Beta-Beta to all.

Please note our new address:

12800 Forest Hill Road

Come out and pay us a visit. We are serving meals as usual, at 12:15 daily from Monday to Friday.

An old fashioned Halloween Party with the traditional corn, pumpkins, cider, and broomsticks, was held at the chapter house on Friday, October 30. Everyone present had a jovial time. Again we congratulate Brother Webb and his committee on the way they handled this affair.

The House Party was followed by our fall initiation, which was held at the chapter house on Saturday, November 21. With our new Brothers, Bellan, Kordich, and Morse we now have an active chapter of eleven members.

Beta-Beta chapter is to be the host of the

annual convention of the Ohio Chapters of Kappa Psi. The roll will include delegates from Xi chapter at Ohio State University, Gamma-Delta chapter at Ohio Northern University, Beta-Phi chapter at Cincinnati College of Pharmacy and Lambda chapter at Toledo University. We cordially invite all of our alumni brothers to attend our business meetings and social functions during the convention. Brother Schweickardt is serving as chairman of the convention, assisted by Brother Webb, chairman of Beta-Beta's local committee, and Brothers Obester, Bellan, Meresicky and Kordich. We will appreciate any suggestions that will aid in making this convention a most successful one. A definite program is being arranged, including a Smoker, Stag Banquet, and interesting talks and discussions. This program will be circulated shortly.

Please watch Beta-Beta's social calendar. Plenty of affairs are being planned, bridge party, smoker, speakers, and the May Dance. You will be advised in the near future of the dates and details. Remember that the entertainment committee is always grateful for any suggestions.

The school year is almost half over and initiation time is again here. The informal initiation will be held on Friday, February 19. The formal initiation will be held the following Tuesday evening. From the interest that most of our pledges are showing in the work which the active chapter is now carrying on, it looks as though a goodly number will be initiated next month.

ALUMNI NEWS

Brother Robert Murphy of Beta-Kappa chapter at the University of Pittsburgh spent a few days with us at the chapter house.

Brother Driggs is working in the Cleveland territory for H. K. Mulford and Company. Brother Driggs will speak to us at one of our meetings. Those who were in school three years ago recall the interesting talk given by Brother Driggs, and are eagerly waiting the opportunity to hear another one of his discussions.

Brother Andrews recently visited us at the chapter house. He is working at Sherwood's Pharmacy in the Rose Building.

Brother Cullinan is purchasing agent for the Hall-Van Gorder Company in Akron.

Brother and Mrs. E. H. Whittaker are living in Toledo, Ohio.

Brother Otto Wolfert is working for the Marshall Drug Company.

Brother Robert Fitch is working for The Nottingham Drug Company.

Brother Aldrich is working for the Marshall Drug Company at East 9th Street and Prospect Avenue.

Brothers Blakeway and Neely visit us quite regularly. Keep up the good work, brothers.

Brother Stanley Brysacz is at the Aetna Pharmacy at 7527 Aetna Avenue, Cleveland, Ohio.

The Charles R. Bauers, '23, had a baby girl—Ellen—Congratulations!

Mr. and Mrs. Charles Lawson, 1668 Hower Ave., announce the engagement of their daughter, Adeline, to Mr. Ralph W. Blakeway, son of Mr. and Mrs. W. P. Blakeway, 9805 Newton Ave.

We are anxious to get the correct address of all our alumni brothers, as the directory (Agora) of our national organization is about to go to press. If you are not receiving communications from your chapter, or if you are not receiving the "Mask," drop us a card with your address.

PHI DELTA CHI

Alpha Alpha of Phi Delta Chi is back on the job again after a pleasant Christmas vacation. The chapter house was practically deserted during this time except for a few of the brothers who took advantage of the time to make themselves a little money. The chapter as a whole has been very fortunate and has kept out of the ranks of the unemployed. We can boast of the fact that at the present time every man affiliated with the active fraternity has a job.

Our social functions to date have been rather limited. We held our annual spring dance during the month of November at Ridgewood country club. This affair was very successful and a good time was enjoyed by all. We had a very good turn-out of alumnae and the active and pledge chapter turned out 100%. We have had a smoker since this time and expect to have a house party in the near future, followed shortly by our spring dance.

Athletic activities are just beginning to be considered. We have entered a bowling

team in the Pharmacy school league and are planning on organizing our basketball team very shortly.

Our pledge organization is coming along very nicely and the time is not far off when they will enter the mysteries of Phi Delta Chi. All these boys seem to have the right spirit and will no doubt make fine fraternity men. Pledge Johnson of New Philadelphia has acquired the name of "swede." Stevenson and Bonheimer seem to take quite an interest in boxing. Sabonya and Pierstorff are around the house quite frequently. Hlavin is busy with the students of the College for Women, and Charles Johnson enjoys bringing his dog around the house once in awhile.

ALUMNAE NEWS

Brother Anderson is still at the W. R. U. Dental school. He is probably very busy and can't stop to see us very often.

Brother Cook resumes his duties with Upjohn.

Brother Robert Kumpf is still with the City Hospital.

Brother Henry Kumpf is now working in our big city.

Brother Koch remains with the Cleveland Clinic.

Brother Baldinger is on the faculty of Notre Dame University.

Brother Gallagher is rendering East Cleveland his competent service.

Brother Ischie stops at the house quite often.

Brother Kuttler is a veteran on the sea of matrimony by this time.

Brother Spiece has resumed his studies for his B. S. degree.

Brother Cusick and Shane are working on the West Side in the same store.

Brother Kessler is still managing a Marshall store on the West Side.

Brother Steidl and Lautenschlager are in the big city of Akron.

Brother Schriener and Bruehler are manager and assistant manager respectively for Standard.

Brother Schroeder has recently been employed by the City Hospital.

Brothers Rauscholtb and Sedely are still at the same store and are razzing one another as usual.

A. Z. O.

A. Z. O. completed an active year with the ushering in of the New Year. The past year has been full of various social functions among which were four smokers at Wille's Lake Shore Gardens, two stags at the A. Z. O. House, a formal at Guildhall on May 8, a celebration by Frater Joseph Eisenberg because of his successful Board Test, and a HILARIOUS time at the Azoan cottage throughout the summer.

Eight men were pledged in September, and the Pledge Dance on December 3 was a great success. Among the faculty present were Dean and Mrs. Spease and Dr. and Mrs. Lankelma. This function was held at the Lyndhurst Country Club and the orchestra employed was Bill Faynes Euclid Park Orchestra. The dinner dance was also attended by some of the boys from the Pittsburgh Chapter of the A. Z. O. Fraternity. One of the speakers on this occasion was Frater Roy Scott who is now President of the Alumni Association.

A midyear meeting of the entire A. Z. O. Fraternity took place at Philadelphia with Frater Al Baskind as the Theta Representative.

Personals

Frater Saul Israel, hailing from our Baltimore Chapter, is now in town taking a course at the Cleveland School of Chiropraxy.

Frater Milford Harris is on a honeymoon trip with the once Lillian Freund to the Bermudas.

Frater Phillip Krenitz announced his engagement to Miss Sophia Teplitz, a Co-ed at Flora Stone Mather College at a formal reception at the Hotel Allerton.

Frater Joe Dworkin is now managing the Baskind Drug at 116th and Buckeye.

Frater Frank Lattin has recently relocated his store and is now at 55th and Broadway. Wish you a lot of luck, Frank.

Frater Seymour Cohen is now working for Robert S. Schultz Drug at Superior and 110th.

B

Art: "We're coming to a tunnel—are you afraid?"

Bert: "Not if you take that cigar out of your mouth."

ALUMNI BOX

Last year the Alumni officers elected at the Lake Shore Hotel started out to re-organize the Association. Holding regular meetings twice a month; sending out letters to every graduate of the school, making personal visits and pleas for enrollment. We gradually brought order from chaos. A correct mailing list was drawn up of all members and certificates were sent to them and then the drive started for new members.

The graduation dance was a wonderful success with the greatest attendance in years. This year the officers were re-elected with one new officer—Secretary Fitch—and kept right on, even having several meetings during the summer. A drive was then started for more members. The answers to the sets of letters sent out are gratifying. Now with the combined dance at the Winton we hope to get together all our members and many new ones. The results of that dance we hope will be an inspiration for many more affairs.

Fellow Alumni, the Association means business. A school of the prestige of ours deserves an active, powerful association. Surely every loyal graduate of the Pharmacy School will be interested enough to want to belong to the Alumni Association so that he can do his bit for the School, for Pharmacy, and directly for himself. If you haven't done so yet send in your enrollment to the School at once and your life membership certificate will be sent to you. At present the officers are working on a constitution which will be submitted at the annual meeting in June. The Alumni Association invites criticism, advice, opinions or questions. We want your interest. Write to Roy Scott, Alumni Editor, c/o the School, or 749 Eddy Road.

If any Alumni have a plan or an article they want published please send it in. Remember, the Association is for all of the Alumni and for the School.

—Roy Scott, '28.

R

Oh, to be a turtle,
A slow and lazy turtle;
To sit around the whole day through—without
an earthly thing to do;
To sun myself upon a log, or idly gossip with
a frog.
Oh, to think what'er befell
I need but draw within my shell, and let the whole
world go to H—!

EXPRESSED OIL

He—"Darling, in the moonlight your teeth are like pearls."

Marjorie—"Oh, indeed! And when were you in the moonlight with Pearl?"

R

"Do you act toward your wife as you did before you married her?"

"Exactly. I remember how I used to act when I first fell in love with her; I used to lean over the fence in front of her house and gaze at her shadow on the curtain, afraid to go in. And I act just the same way now when I get home late."

R

A bishop had been speaking with some feeling about the use of cosmetics by girls.

"The more experience I have of lipstick," he declared warmly, "the more distasteful I find it."

R

His letter read: "I'm enjoying Florence immensely."

His wife replied: "You can stay in Europe. I'm having a good time with Oscar."

R

Father of Beloved: "You like my daughter?"
Suitor: "Like her? I would spring off the top of the cathedral for her, slave to please her, go through fire to save her pain—"

Father: "Very good. But I can't consent to the marriage—I am a pretty good liar, and one in the family is enough."

R

They were seated at a table in a night club. Suddenly there was a loud crash.

"Come," he said, taking her hand, "let's dance."

"Don't be foolish," she answered, "that wasn't the orchestra, the waiter dropped a tray of dishes."

R

"You seem to have plenty of intelligence for a man in your position," sneered a barrister, cross-examining a witness.

"If I weren't under oath, I'd return the compliment," replied the witness.

R

He—"I have many reminders of my prowess in winter sports."

She—"What are they?"

He—"Three cups and two medals."

She—"Lovely. I have trophies from the winter sports also."

He—"What are they?"

She—"Five engagement rings."

R

Zak's Present from the Dean

Satan was having a time with an unruly new arrival, a little dried-up fellow, but very active, who refused to obey any of the rules and regulations, and raised Cain generally.

"Now look here," roared the Old Nick, catching hold of him. "Who do you think you are? You seem to think you are running this place."

"Sure thing," said the little fellow. "Didn't the Dean give it to me time and again before I came here?"

A university student received a question during examinations that he did not know how to answer. He wrote the question on his paper and gave this reply:

"God knows; I don't. Merry Christmas."

The day after New Year's he received back his paper, with this notation:

"God gets a hundred; you get zero. Happy New Year."

¶

Resourceful

G. G.—"You don't notice that knock in the engine so much as last Sunday, do you?"

D. G.—"No, what did you do to it?"

G. G.—"Oh, I just loosened one of the fenders before we started."

¶

That'll Hold Him

He—"You know your mother thinks I'm quite a wit."

She—"Well, she's half right."

—News.

¶

Even as You and I

"Do you mind telling me what you paid for that car?"

"Yes, I haven't."

¶

Tommy returned from school with a perplexed brow.

"What's the matter, sonny?" asked his father.

"I can't get a certain sum right," returned the boy. "I wish you'd help me with it, dad."

His father shook his head.

"Can't, my boy," he said, "it wouldn't be right."

"I don't suppose it would," Tommy replied, "but you might have a try."

¶

A few minutes after an alarm of fire was given in a hotel, one of the guests joined the group who were watching the fire and chaffed them on their apparent excitement. "There was nothing to be excited about," he said. "I took my time about dressing, lighted a cigaret, didn't like the knot in my necktie, so tied it over again—that's how cool I was."

"Fine," one of his friends remarked, "but why didn't you put on your trousers?"

¶

Smiles on the Way

They were on the train the night of their wedding, and the groom gave the porter a dollar not to tell any of the passengers that they were bride and groom.

At breakfast the next morning everyone stared. The groom called the porter and asked, "Did you tell anyone we were just married?"

"No, Sah," replied the porter, "I tol' dem you was just friends."

¶

Father (at son's 21st birthday party)—"You are of age now, and ought to help me a little."

Son—"Yes, dad; what can I do for you?"

Father—"You might pay the last three installments on your baby perambulator."

¶

Teacher—"Here you are, late again for Sunday school. How do you account for all this tardiness?"

Smith—"Please, sir, heredity. I am the son of the late John Smith."

"Some men thirst after fame, some after love, and some after money."

"I know something that all thirst after."

"What's that?"

"Salted almonds."

—Boston Transcript.

¶

The Court—"Mr. Foster, you've seemingly evaded most of the questions. Do you know anything at all? For instance, do you know any of the jurors?"

Mr. Foster—"Yes, Your Honor, more than half of them."

The Court—"Are you willing to swear you know more than half of them?"

Mr. Foster (quickly)—"I'm willing to swear I know more than all of 'em put together."

—The Huntington Banker.

¶

Squire Perkins (to his wife)—"Nell, after I die, I wish you would marry Deacon Brown."

Nell—"Why so, Hiram?"

Squire—"Well, the deacon trimmed me on a horse trade once."

—Columns.

¶

A young salesman, whose wife was making a prolonged visit with her parents, was quite excited on receiving this telegram: "Twins arrived. Doing fine. More later."

Rushing back to the telegraph office the young husband wired back: "Migosh, kid, countermand later order. Two is plenty."

—News.

¶

College lad (arrested for speeding)—"But, your honor, I am a college boy."

Judge—"Ignorance doesn't excuse anybody!"

—Troubadour.

¶

Susie—"I'd like to see the captain of the ship."

Rookie—"He's forward, miss."

Susie—"I don't care, this is a pleasure trip."

¶

Jones—"Have you seen one of those instruments that can tell when a man is lying?"

Smith—"Seen one? H—, I married one."

¶

Business Man (after interviewing his daughter's suitor): "I regret I cannot see my way to allow you to marry my daughter at present, but give me your name and address; then, if nothing better turns up in the near future, you may hear from us again."

¶

Mrs. Newlywed—"Are you sure these seeds grow into big, strong trees?"

Merchant—"Madam, I will guarantee them."

Mrs. Newlywed—"Well, in that case, I'll take a hammock as well."

—Southern Lumber Journal.

¶

A revivalist said to the congregation:

"There is a man among us who is flirting with another man's wife. Unless he puts \$5 in the collection box, his name will be read from the pulpit."

When the collection box came in there were six \$5 bills in it, and a \$2 bill with a note pinned to it, saying:

"This is all the cash I have, but will send the other \$3 Wednesday."

Son—"Her niece is pretty good looking, isn't she, Pa?"

Pa—"Don't say 'knees is'. Always say 'knees are'."

R

Willie—"Did Mr. Edison make the first talking machine, Pa?"

Pa—"No, my son. God made the first talking machine, but Edison made the first one that could be shut off."

—Bell Telephone Exchange.

R

Ned—"Well, how is your companionate marriage working out?"

Jed—"Terrible—I've lost my wife's address."

R

"I am looking for a criminal lawyer," said the stranger. "Have you one here?"

"Well," said the native reflectively, "we think we have, but we can't prove it on him."

R

"Nigga, befo' I finish rollin' mah sleeves an' sails in, has yo' any mo' questions t' ask?"

"Jes' one, big boy, is yo' all leavin' a wife an' chillun?"

R

While traveling through England last summer, I had the occasion to participate in a dedication of a new fire engine in a small town right outside of London. In concluding his speech the Mayor brought out the following toast:

"May she (referring to the fire engine) be like the old maids of our town, always ready but never called for."

—Grand Rapids Banker.

R

Welfare Worker—"And what are you in here for, my man?"

Prisoner—"Flattery, ma'am. Caught imitating another man's signature on his check."

—Exchange.

R

"You say you are going to marry a woman with 500 pounds a year income, and try to persuade me it is a love match?"

"It is—I love money."

R

Is It Love?

Rosie: "You didn't shave this evening, did you?"
Art: "I shaved this morning and it makes my face sore to shave twice a day."

Rosie: "Well, it makes my face sore when you shave only once."

R

A small boy called on the doctor one evening. "Say, Doctor, I've got the measles, but I can keep it quiet."

The doctor looked up, puzzled, and finally asked the boy what he meant by that.

"Oh," suggested the small patient, "what'll you give me to go to school and scatter it among all the rest of the kids?"

R

Big He-Man—"I, developed these big muscles by working in a boiler factory."

Innocent Young Thing—"Oh, you great big wonderful man! And what do you boil?"

R

"I've never kissed a girl in all my life."

"Well," cried the flapper, "don't come buzzing around me, I'm not running a prep school."

Pretty Young Thing: "Are you sure these curtains won't shrink? I want them for my bedroom windows."

Candid Clerk: "Lady, with your figure, you should care—you should care."

—Phoenix Flame.

R

The woman confessed to her crony:

"I'm getting old and I know it. Now-a-days, the policeman never takes me by the arm when he escorts me through traffic."

R

An Irishman when asked to give a definition of a bull submitted the following:

"If you see thirteen cows lying down in a field, and one of them is standing up, that's the bull."

R

Power of Gold

"Is the doctor treating her for nervousness?"

"Oh dear, no. She is rich enough to have Psychoneurosid."

—Boston Transcript.

R

Handy Wife

"Mary has a wonderful husband."

"Yes? Houzat?"

"Why, he helps her do all the work. Monday he washed the dishes with her. Tuesday he dusted with her. And tomorrow he is going to mop the floor with her."

—Brown Jug.

R

Customer: "I cannot sleep at night—the least little sound disturbs me. I'm the victim of insomnia. Even the cat on our back fence distresses me beyond words."

Druggist: "This powder will be effective."

Customer: "When do I take it?"

Druggist: "You don't. Give it to the cat in milk."

—Green Griffin.

R

The doctor was puzzled.

"You ought to be getting well by now," he said. "Have you carried out my instructions all right?"

"Well, Doctor," said the patient, "I've done most of them, but I can't take that two-mile walk every morning like you ordered. I get too dizzy."

"What do you mean, 'dizzy'?" asked the doctor.

"Well, sir," said the patient, "I must have forgotten to tell you. I'm a light-house keeper."

—Answers.

R

Have you heard the one about the ant that gazed longingly but helplessly at the body of a dead horse. Just then a bootlegger's truck rattled by and a case fell off and crashed to the ground. A puddle formed, and the ant, thirsty, took a sip. Then he seized the horse by the tail and shouted: "Come on, big boy; we're going home."

—Skull and Bones.

R

Dentist: "I'm sorry but I am out of gas."

Girl in Chair: "Ye Gods, do dentists pull that old stuff, too?"

R

Him—"Pardon me, but you look like Helen Black."

Her—"Yeah? But I'd look worse in yellow."

Pharm.

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A yellow illustration of a mortar and pestle is centered behind the table of contents. The mortar is a bowl shape with a large 'R' on it, and the pestle is a long cylinder. Radiating lines emanate from the mortar and pestle, creating a sunburst effect across the page.

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Report on Medical Plant

Garden—The Squire Valleevue

By Professor F. J. Bacon

The conception of The Squire Valleevue Medicinal Plant Garden assumed definite form two years ago, when Mr. Andrew Squire invited the School of Pharmacy to make use of Valleevue Farm for the cultivation of drug plants.

The first year was devoted to organization and the planting of a small number of plants. During the year of 1930 one acre was planted. A detailed report appeared in the school paper, the PHARMACON, June, 1931.

As stated in our first report the purposes of the Garden are:

1. To investigate the cultivation of medicinal plants.
2. To produce a supply of authentic vegetable drugs to be used and developed into preparations used by the University Hospitals.
3. To supply plants either in the fresh state or in the dried condition for research work.
4. To furnish a field laboratory to study plants in connection with course work in the field of Botany and Pharmacognosy.

During the past season three half acre plots were cultivated. One plot was devoted to the culture of *Digitalis* to supply crude drugs for the preparation of pharmaceuticals to supply University Hospitals. Two plots were planted to a number of plants which are listed below and the more important ones will be explained in this report.

The following plants were cultivated during the season of 1931.

Lists of Plants Cultivated 1931

Botanical Name	English Name	Part Used
<i>Althea officinalis</i> L.	Marshmallow	Root
<i>Anethum graveolens</i> L.	Dill	Seed
<i>Atropa Belladonna</i> L.	Belladonna	Leaves
<i>Brassica</i> sp.	Mustard	Seed
<i>Calendula officinalis</i> L.	Calendula	Flowers
<i>Cannabis sativa</i> L.	Hemp	Seed
<i>Capsicum frutescens</i> L.	Red Pepper	Fruits
<i>Carthamus tinctorius</i> L.	Safflower	Seed
<i>Carum Carvi</i> L.	Caraway	Seed
<i>Chenopodium ambrosioides anthelminticum</i> L.	American Wormseed	Oil
<i>Chrysanthemum cinerariifolium</i> (Trev.) Bore.	Pyrethrum	Flowers
<i>Cinnamomum Camphora</i> (L.) N. & E.	Camphor	Oil
<i>Cnicus benedictus</i> L.	Blessed Thistle	Herb
<i>Conium maculatum</i> L.	Poison Hemlock	Seed
<i>Coriandrum sativum</i> L.	Coriander	Seed
<i>Cucurbita Pepo</i> L.	Pumpkin	Fruits
<i>Datura innoxia</i> Mill.	Mexican Datura	Leaves
<i>Delphinium ajacis</i> L.	Larkspur	Seed
<i>Digitalis purpurea</i> L.	Foxglove	Leaves
<i>Foeniculum vulgare</i> Mill.	Fennel	Seed
<i>Grindelia</i> sp.	Gum Plant	Herb
<i>Helianthus annuus</i> L.	Sunflower	Seed
<i>Hyoscyamus niger</i> L.	Henbane	Leaves
<i>Iris florentina</i> L.	Orris Root	Rhizome
<i>Iris germanica</i> L.	Orris Root	Rhizome
<i>Linum usitatissimum</i> L.	Flaxseed	Seed
<i>Mentha piperita</i> L.	Peppermint	Oil
<i>Mentha spicata</i> L.	Spearmint	Oil
<i>Mentha citrata</i> Ehrh.	Bergamot Mint	Oil
<i>Mentha arvensis</i> var. <i>piperascens</i> Hol.	Japanese Mint	Oil
<i>Monarda didyma</i> L.	Oswego Tea	Oil
<i>Monarda fistulosa</i> L.	Wild Bergamot	Oil
<i>Monarda punctata</i> L.	Horsemint	Oil
<i>Nepeta Cataria</i> L.	Catnip	Herb
<i>Ocimum basilicum</i> L.	Garden Basil	Oil
<i>Origanum Majorana</i> L.	Sweet Marjoram	Oil
<i>Papaver somniferum</i> L.	Opium Poppy	Capsules, Seed
<i>Pelargonium odoratissimum</i> Ait.	Rose Geranium	Oil
<i>Plantago Psyllium</i> L.	Psyllium Seed	Seed
<i>Rhamnus Purshiana</i> DC	Cascara Sagrada	Bark
<i>Ricinus communis</i> L.	Castor	Seed
<i>Ruta graveolens</i> L.	Rue	Oil
<i>Salvia officinalis</i> L.	Sage	Leaves

The harvested crops were dried under the proper conditions in one of the farm buildings. Leaf drugs were stripped from the stems and baled. Seeds and other drugs were cleaned and stored for future use.

The material collected is being used during the school year by students needing drug plants for laboratory work and by graduate students working upon their research problems on the various plants. Samples of the material were selected for course work in Pharmacognosy.



Representative plants from
the rows of DATURA IN-
NOXIA Mill.—Mexican
Datura.

Natural Shade

With the excellent accommodations afforded at Valleevue Farm for experiments demanding shade culture this phase of the work has received considerable attention. Beds of native plants have been increased by root cuttings and by planting seeds. Several plants, which were not established in the wooded area, have been transplanted from material gathered from other locations.

In order to have a check list of the medicinal plants requiring natural shade or other natural conditions which are growing at Valleevue the following list was prepared.

Medicinal Plants Growing in the Wooded Area

Botanical Name	Common Name
<i>Achillea Millefolium</i> L.	Milfoil
<i>Aconitum</i> sp.	Aconite
<i>Acorus Calamus</i> L.	Calamus
<i>Actaea alba</i> (L.) Mill.	White Baneberry
<i>Actaea rubra</i> (Ait.) Willd.	Red Baneberry
<i>Adiantum pedatum</i> L.	Maidenhair
<i>Agropyron repens</i> (L.) Beauv.	Couch-grass
<i>Ampelopsis quinquefolia</i> Michx.	Wood-bine
<i>Apocynum androsaemifolium</i> L.	Spreading Dog-bane
<i>Aralia nudicaulis</i> L.	American Sarsaparilla
<i>Aralia racemosa</i> L.	Spikenard
<i>Arctium Lappa</i> L.	Burdock
<i>Arisaema triphyllum</i> (L.) Torr.	Jack-in-the-pulpit
<i>Asarum canadense</i> L.	Wild Ginger
<i>Asparagus officinalis</i> L.	Asparagus
<i>Aspidium marginale</i> Swz.	Shield-fern
<i>Baptisia leucantha</i> T. & G.	Wild Indigo
<i>B. Baptisia tinctoria</i> (L.) R. Br.	American Indigo
<i>Castanea dentata</i> (Marsh) Borkh.	American Chestnut
<i>Caulophyllum thalictroides</i> (L.) Michx.	Blue Cohosh
<i>Celastrus scandens</i> L.	False Bittersweet
<i>Chimaphila umbellata</i> (L.) Nutt.	Pipsissewa
<i>Cimicifuga racemosa</i> (L.) Nutt.	Black Cohosh
<i>Collinsonia canadensis</i> L.	Stone-root
<i>Cornus florida</i> L.	Dogwood
<i>Crataegus oxyantha</i> L.	Hawthorn
<i>Crocus sativus</i> L.	Saffron

Botanical Name	Common Name
<i>Cydonia vulgaris</i> Pers.	Quince
<i>Cynoglossum officinale</i> L.	Hound's-tongue
<i>Cypripedium acaule</i> Ait.	Lady's-slipper
<i>Cypripedium spectabilis</i> L.	
<i>Cypripedium parviflorum</i> Salish.	Small yellow Lady's-slipper
<i>Daucus Carota</i> L.	Wild Carrot
<i>Dentaria Bulbifera</i> L.	Toothwort
<i>Dentaria Diphylla</i> Michx.	Two-leaved Toothwort
<i>Dicentra cucullaria</i> Torr.	Dutchman's-breeches
<i>Dicentra canadensis</i> Walp.	Turkey-corn
<i>Echinacea purpurea</i> Moench	Cone-flower
<i>Equisetum hyemale</i> L.	Scouring rush
<i>Erigeron canadensis</i> L.	Canada Fleabane
<i>Eryngium aquaticum</i> L.	Water Eryngo
<i>Erythronium americanum</i> Ker.	Adder's-tongue
<i>Euonymus atropurpureus</i> Jacq.	Wahoo
<i>Eupatorium perfoliatum</i> L.	Boneset
<i>Eupatorium purpureum</i> L.	Queen of the Meadow
<i>Eupatorium urticaefolium</i> L.	
<i>Fraxinus americana</i> L.	White Ash
<i>Gaultheria procumbens</i> L.	Wintergreen
<i>Geranium maculatum</i> L.	Cranesbill
<i>Hamamelis virginiana</i> L.	Witch Hazel
<i>Hedeoma pulegioides</i> (L.) Pers.	Pennyroyal
<i>Helianthemum canadense</i> (L.) Michx.	Frostwort
<i>Hepatica Triloba</i> Chaix.	Liverwort
<i>Heuchera americana</i> L.	Alum-root
<i>Hydrangea arborescens</i> L.	Seven-bark
<i>Ilex glabra</i> L. A. Gray	
<i>Ilex opaca</i> Ait.	American Holly
<i>Ilex verticellata</i> (L.) A. Gray	Feverbush
<i>Impatiens biflora</i> Walt.	Touch-me-not
<i>Inula Helenium</i> L.	Elecampane
<i>Iris japonica</i> Thunb.	Japanese Iris
<i>Juglans cinerea</i> L.	Butternut
<i>Juglans nigra</i> L.	Black Walnut
<i>Juniperus</i> sp.	
<i>Larix europaea</i> DC	European Larch
<i>Liriodendron Tulipifera</i> L.	Tulip-tree
<i>Lobelia Cardinalis</i> L.	Cardinal Flower
<i>Lycopodium complanatum</i> L.	Ground pine
<i>Lycopus virginicus</i> L.	Bugleweed
<i>Maianthemum bifolium</i> Desf.	Wild Lily-of-the-valley
<i>Magnolia acuminata</i> L.	Cucumber tree
<i>Marrubium vulgare</i> L.	Hoarhound
<i>Melilotus alba</i> Desv.	Sweet Clover
<i>Mentha arvensis</i> L.	Wild Mint
<i>Mitchella repens</i> L.	Partridge-berry
<i>Paeonia officinalis</i> L.	Peony
<i>Panax quinquefolium</i> L.	Ginseng
<i>Phytolacca decandra</i> L.	Poke
<i>Pinus Strobus</i> L.	White Pine
<i>Pinus sylvestris</i> L.	Scotch Pine
<i>Podophyllum peltatum</i> L.	Mayapple
<i>Polygonatum biflorum</i> (Walt.) Ell.	Solomon's Seal
<i>Polymonium reptans</i>	
<i>Polypodium vulgare</i> L.	Polypody
<i>Prunus serotina</i> Ehrh.	Wild Black Cherry
<i>Rhamnus cathartica</i> L.	Buckthorn
<i>Rhamnus frangula</i> L.	Alderthorn

Botanical Name	Common Name
<i>Rubus Ideans</i> L.	Raspberry
<i>Rubus nigrobaccus</i> Bailey	Blackberry
<i>Rubus strigosus</i> Michx.	Wild Red Raspberry.
<i>Rubus villosus</i> Ait.	Blackberry
<i>Rumex crispus</i> L.	Yellow Dock
<i>Sambucus canadensis</i> L.	Elder
<i>Sanguinaria canadensis</i> L.	Bloodroot
<i>Sarracenia purpurea</i> L.	Pitcherplant
<i>Sassafras variifolium</i> (Salisb.) O. Kze.	Sassafras
<i>Scutellaria lateriflora</i> L.	Skullcap
<i>Silphium perfoliatum</i> L.	Indian-cup
<i>Smilacina racemosa</i> Desf.	False Solomon's Seal
<i>Solanum Dulcamara</i> L.	Bittersweet
<i>Stylophorum diphyllym</i> (Michx.) Nutt.	Yellow Poppy
<i>Taraxacum officinale</i> Weber	Dandelion
<i>Thuja occidentalis</i> L.	White Cedar
<i>Trifolium pratense</i> L.	Red Clover
<i>Trillium erectum</i> L.	Bethroot
<i>Trillium grandiflorum</i> (Michx.) Salisb.	Bethroot
<i>Tsuga canadensis</i> (L.) Carr.	Hemlock
<i>Tussilago Furfara</i> L.	Colt's-foot
<i>Ulmus fulva</i> Michx.	Slippery Elm
<i>Verbena hastata</i> L.	Blue Vervain
<i>Veronica virginica</i> L.	Culver's root
<i>Verbascum Thapsus</i> L.	Mullen
<i>Viburnum cassinoides</i> L.	Withe-rod
<i>Viburnum dentatum</i> L.	Arrow-wood
<i>Viburnum lentago</i> L.	Nannyberry
<i>Viburnum molle</i> L.	Arrow-wood
<i>Viburnum nudum</i> Michx.	Arrow-wood
<i>Viburnum opulus</i> L.	Highbush Cranberry
<i>Viburnum prunifolium</i> L.	Black Haw
<i>Zanthoxylum americanum</i> Mill.	Northern Prickly Ash.

gather specimens for winter study. Many of our laboratory periods in General Botany are held at Valleevue where the principals of Botany are studied in the field.

Among the numerous problems that received attention during the past season, a few seem to merit special attention.

Digitalis

During the winter of 1930-31 many Digitalis plants were winter-killed. Early in the spring the field was transplanted and by fall we were able to harvest a good supply of leaves. The leaves were cut in October, dried and milled. A tincture was made from the leaves and the Digitalis preparations used by the University Hospitals are manufactured from leaf grown at Valleevue. It is worthy of note here that our Digitalis assayed 50 to 75 per cent over the United States Pharmacopoeial standard.

Safflower

The co-operative experiment on the culture of Russian Safflower with the Bureau of Drug Plant Industry of the Department of Agriculture was continued last year. About two-fifths of an acre was planted to the Russian variety of Safflower (*Carthamus tinctorius* L. var. *Buchara* No. 7) and the garden collected two bushels of seed. This seed was sent to the Bureau of Drug Plant Industry in order that they might try out the culture of this plant in other localities of the United States. The garden has agreed to plant a new strain of Safflower this year for the Bureau.

In addition to Safflower two varieties of hemp were cultivated for the Bureau of Drug Plant Industry. The dried flowering tops of hemp (*Cannabis sativa* L.) have been used in medicine for many years as an anodyne and narcotic. Recently the plant has been grown for its fixed oil. Two lots of Russian hemp seed were planted, the short Russian Hempseed No. 3 St. Oskol Komsok Gov. and No. 393 Typical, Province Orel, Oslov District. In both varieties the seeds grew well and formed short stalks about three to four feet high densely flowered along the entire stem. As the seeds formed the birds were attracted to them and almost the entire crop was eaten. The garden is planting a new variety this year which has been sent to us by the Bureau of Drug Plant Industry to replace the seed lost last year.



Pyrethrum Flowers Cultivated in the Open Field

The above plants constitute a large share of the native flora of this region. In several cases the plants listed have been imported from other localities and are well established in the garden. Students in advanced Botany and in courses in Classification of Plants study the material in the field and



HALF ACRE PLOT OF SAFFLOWER.

Rows 40 Inches Apart and 200
Feet Long.

SHOW GLOBES Maurice Finberg, '35

The drug store window is returning to the romantic background of the past with the reappearance of the prodigal show globe. Emblems of an ancient profession, these brilliantly illuminated red, blue, or yellow globes have always identified the drug store window, just as the mortar and pestle have symbolized the art of compounding medicaments. In the past, those who sought an apothecary's shop would look for these luminous beacons, and now, when our drug store windows are so often crowded with sundries carried by other merchants, these same beacons light the way to the pharmacy.

In regard to the origin of the use of these colored show globes, various notes of interest have been unearthed. According to the Oxford Dictionary, the word "carboy," and show globes easily fall into this category, is a corruption of the Persian word "Quarabah" meaning a large flagon used for wine or rose-water. It is easy to imagine that these carboys were the forerunners of our modern show globes. Show carboys filled with brightly colored medicines were a prominent feature of the druggists' shops of the eighteenth century, and were frequently decorated with symbols which bore some resemblance to those employed by the alchemists for the metals and other chemical materials.

Undoubtedly these colored vessels were used in the first instance by the apothecary

and physician of older times as a means of distinguishing their places of business, the custom being carried up to the present time partly for the same reason and partly for sentimental considerations. With regard to the colors themselves, the blue and red were supposed to represent venous and arterial blood respectively, appropriate enough colors for the physician, although the apothecary probably associated them with minerals or medicines.

One authority places the date at which colored carboys were first used at about the time of the Great Plague—viz., 1665, a time when people had good reasons for wanting to reach the apothecary's shop without unnecessary loss of time, the colored lights serving to guide the hurried messenger.

An interesting story is told about another supposed beginning of the show globes. When Julius Caesar invaded Iceland, he selected for his landing a spot on a shelving shore directly opposite an apothecary's shop in the window of which were certain large bottles containing drugs in the process of maceration, the liquids being of different colors. On the promise of immunity as a reward, the arrangement was made that this apothecary would place lanterns behind the bottles to guide the landing at night. The undertaking was successful, and to commemorate it Caesar issued an edict that thereafter all apothecaries would be honored by being allowed to use colored bottles to identify their establishments.

No doubt further research would show more and older references to the origin of the show globe. Now that these globes are reappearing in the drug store windows from which they were banished to the cellar, any information about them is timely. It is hoped that they will again have a prominent place in the drug store window, attracting attention in the present as successfully as they have done so in the past.

EIGHTIETH ANNUAL MEETING of the American Pharmaceutical Association

In accordance with an arrangement made in 1927, the 80th annual meeting will be held in Toronto, Canada, the week of August 22 to 27, 1932.

This will be a joint meeting with the Canadian Pharmaceutical Association and the Canadian pharmacists are planning to make it an outstanding pharmaceutical event in the history of the two countries. Prominent pharmacists are expected from abroad as well as from the South American countries. The British Pharmaceutical Society and the British Pharmaceutical Conference will send a delegation of distinguished pharmacists. An unusual program as to business and entertainment will be offered. Headquarters will be at the Royal York Hotel, one of the largest and best equipped hotels on the American Continent.

RECLASSIFICATION OF PHARMACISTS IN THE VETERANS' ADMINISTRATION

The American Pharmaceutical Association some time ago requested the Veterans' Administration to change the classification of pharmacists from the Subprofessional to the Professional and Scientific Service and to change the title of Assistant Pharmacist to Pharmacist's Assistant. It is very gratifying to record the recent issuance of Supplement No. 8, Revised Regulations for Positions in the Field Service, Veterans' Administration, which, among other changes, directs the following:

"Pharmacist. Change grade and salary range to: P & S—1 Salary Range \$2000, \$2100, \$2200, \$2300, \$2400, \$2500, \$2600.

"Assistant Pharmacist. Change designation of this position to Pharmacist's Assistant."

The duties of these positions are given as "Pharmacist—To prepare medicines; to compound prescriptions, and to issue drugs for the activity; to maintain stock and supplies and records incident thereto; to prepare reports and supervise such assistants as may be assigned. Pharmacist's Assistant—To assist in the compounding and dispensing of prescriptions, preparation of tinctures, extracts and stock preparations; to prepare necessary reports and to perform such other duties as may be required incident to the general care and operation of the pharmacy."

These changes place pharmacy on a professional basis in the Veterans' Administration and are in accord with the recommendations of the Personnel Classification Board in its report to Congress during the last session, with respect to the classification of Civil Service Employees in the Field Service of the Government. Pharmacists and Pharmacist's Assistants now enter the administration through the Civil Service.

DO NOT BUY TOOTHBRUSH FROM OPEN COUNTER

No toothbrush that has lain unprotected on a store counter is fit to put into one's mouth. Not only is such a brush exposed to dust and dirt from the atmosphere, but it receives pollution from untold numbers of fingers. A writer in *Hygeia*, the health magazine, calls attention to the vicissitudes of the much tested toothbrush:

"Watch the toothbrush buyer in search of just the right sort of brush to give his mouth that well groomed feeling of perfect cleanliness. He enters the drug store and approaches the toothbrush counter. He dives determinedly into the heap, selecting, rejecting until he finds one that suits his fancy. He drags it forth and then, O Shades of Hygiene, he rubs his thumb contemplatively over the bristles. If he has good luck, he eventually retrieves the ideal brush and retires jubilantly, leaving an untold number of tested brushes for the next comer's thumb and somebody's mouth."

CONDEMNATION**Barney Weinstein, '32**

To become a self-made doctor,
Ride Alexander's car.
You'll learn to cure Lumbago,
And how to kill Catarrh.

Rem-ember that Rem-arkable Rem-edy
Is sure to cure your cold,
Lord, I wish I had a nickel
For every bottle that's been sold.

"Don't feed your baby dope," they say,
"It's found in all cough preps."
And that's the way Smith Brothers
Built up some dandy reps.

Most people can't see through this farce
Protected by the law,
But the same folks blame the pharmacist
For any little flaw.

Manufacturers are ruining
The druggist and the doc,
Tell folks to buy some "Aspirin"
To cure colds by the clock.

The docs don't trust the pharmacist,
He's been black-balled, you see;
So the doctor writes an R
For "little pink pills"—P. D.

The pharmacist is forced to buy
The pills from his enemy.
While the manufacturer tells us how
To cure water-on-the-knee.

So the doctor and the pharmacist
Stand back—wait for the day
When they'll both work for a drug house
For very little pay.

Who do you think is more capable
To tell you what to take,
When you have a funny feeling
Or a common tummy-ache?

The drug house makes a simple prep
And colors it red or blue.
It cured John Jones in Michigan,
It surely should cure you!

R

"Say, do I have to see a doctor before I get
liquor in this place?"
"No, afterwards."

OHIO'S CIGARETTE TAX

When our state has need of money,
From the Drys and from the Wets;
Like a bee collecting honey,
Gathers it on cigarettes.

So they placed a special burden,
On the man who works and sweats
When Ohio raised the curtain,
With its tax on cigarettes.

Thirteen cents of every dollar,
When you buy your "Lucky Pets,"
While you kick, complain and holler,
Goes for tax on cigarettes.

You may light your pipe or stogie,
Blow your smoke in rings or jets,
But you burn up real tax money,
When you smoke your cigarettes.

You can purchase El Productos,
And escape the taxing nets,
Or your fifty cent Per-Fectos,
But you pay on cigarettes.

All the members of the Legion,
And the battle-scarred old vets,
In Ohio's sun-kissed region
Pay that tax on cigarettes.

And they say there's no exception,
Whether Blondes or nice Brunettes
For the state takes its exaction,
When they light their cigarettes.

Now of all the special taxes,
Causing statesmen some regrets,
When the voters with their axes,
Chop that tax on cigarettes.

We believe in fairest dealing,
Whether cards or at roulettes,
And I favor prompt repealing,
Of the tax on cigarettes.

William H. Herner, Monroeville
Representing 30th Senatorial District

R

His Anatomy Exposed

Mrs. Browne: "You have some very interesting
pictures on your table. Here's one that looks as
though it might be an airplane view of the River
Meander, in Turkey."

Mrs. McCallom: "Oh, dear, I don't know how
that picture got there. That's an X-ray photo-
graph of my husband's stomach."

***What? Alumni Smoker
Where? Allerton Hotel
When? May 17, 1932***

***Very Short Business
Meeting***

Cards

Eats

**and
?**

Tickets \$1.00

Let's Go

***Make this a Reunion of your
Class***

The Reserve Pharmacan

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

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Vol. 6

Cleveland, Ohio

WESTERN RESERVE SCHOOL OF PHARMACY

April, 1932

No. 2

EDITORIALS

Our present law in Ohio requires that the applicant for pharmacist's examination must be a graduate of a recognized school of pharmacy and must have either three years of school plus one year of practical experience or four years of school. These requirements have served their purpose for many years and it is about time that they were changed.

WORK

We all believe that practical experience of the right sort is a vital factor in our educational scheme, but this point has been sadly neglected in the past, for often the embryo pharmacist receives credit for time spent behind the soda fountain or acting as a porter in a drug store. He is working in a drug store, true enough, but the knowledge and impressions of pharmacy which he slowly assimilates are completely surrounded by a fog of indifference, for he doesn't know what it is all about, nor is he given any opportunity to find out. Many an employer takes no personal interest in his clerks. He does not attempt to assist the young man who is working hard trying to find himself and to improve himself. The clerk is supposedly serving his apprenticeship in the profession, but does he receive any help, information, or encouragement from his employer? Not very often. We have entirely too many drug store proprietors who are too indifferent or too selfish to

think of anything but the cash register and never give their help any paternal consideration. The clerk who is ambitious is very fortunate if he works for some one who is interested enough to answer his questions, to explain procedures to him, to supervise his work and give him an opportunity to become acquainted with drugs and prescriptions, to encourage him in his studies and to instill in him pride of his profession instead of dissatisfaction.

The whole problem of practical experience, particularly in our larger cities, could be solved very nicely by supervision of stores employing apprenticed pharmacy clerks. This supervision might be regulated by the school, or better yet, be under the control of local professional societies such as the Academy of Pharmacy. However, in the larger western states where distances across the state are often hundreds of miles, and even in our own rural districts, supervised retail experience is impractical.

Insufficient practical experience is often a hindrance to reciprocal registration because of the lack of uniformity in various state requirements. Some apprenticeship in a retail drug store is required by most states, the general consensus of opinion being one year of retail experience coupled with four years of college training. The N. A. B. P. does not limit the time when this experience shall be acquired, excepting

that it must not be concurrent with the college attendance. If this is interpreted literally, summer vacation time will count in most states. However, according to the Ohio law, one full year of credit is given for each year in college; hence, at the present, time spent in a retail pharmacy during the summer months does not count toward the requirement. Fortunately most of our students have sufficient experience before they matriculate and it is only occasionally that one is prevented from taking the examination immediately upon graduation. Unless this Ohio law is changed soon, Ohio registrants will be barred reciprocally from many states in the near future.

Most universities have either a prescription dispensary or a model drug store in which students obtain a limited amount of experience. Others, like Reserve, have a student hospital in connection with the school where students can obtain some training. However, such experience does not comply with the requirements of the pharmacy laws as most of them limit the experience to retail pharmacies. The student detailed to the hospital gets prescription experience but lacks practice in merchandising. In most cases the physicians in a hospital use numbers to indicate certain formulas, and, while the applicant may know exactly how to compound No. 425, for example, this training does him no good outside of that particular hospital. Hospital training is undoubtedly of assistance in teaching the student how to approach a doctor, how to criticize a prescription that may have incompatibilities or errors in dosage, but here particularly the fact should by all means be emphasized that it is not the place of the pharmacist to tell the doctor how to do his doctoring.

Inexperienced graduates do not meet the needs of a modern drug store. Most pharmacists need some one to assist them who can work with dispatch at everything that comes up in the usual store routine. Pharmacy in actual practice as a profession alone is almost unknown today. Modern practical pharmacy is more than a profession. It couples able commercial ability with pharmaceutical requirements. The practice of pharmacy today means buying and selling a vast number of sundries in addition to biologicals, pharmaceuticals, patents, etc. The

majority of our colleges, overanxious about merchandising, have tried to eliminate it entirely from the curriculum whereas the tendency should be to teach the student to keep merchandising within reasonable bounds.

The college should by all means encourage its students to get as much out of their practical experience as possible, as many work all summer without going near a prescription counter. They should be urged to put into actual practice all that they have learned in school. If the experience does no more than accustom the students to the atmosphere of the retail store, something has been accomplished. A college graduate without any retail experience hasn't the qualifications which the state license grants him to assume charge of a retail pharmacy. Most state boards feel that some experience makes him a much better dispensing pharmacist as he has become accustomed to the routine under which he will be required to practice.

To you students, we have only one thing to say. Get all the experience in pharmacies which you possibly can, without, of course, neglecting your studies or injuring your health. Vary your work as much as possible and do not be afraid of asking your employer too many questions because most pharmacists welcome the chance to display their professional knowledge. Make all the contacts you can with retail pharmacists. If you are sincere and willing to work, these contacts will prove valuable to you in the future.

It is our firm belief that four years of school plus one year of practical experience should be the minimum requirement for the practice of pharmacy. Since it is at present impossible to satisfactorily supervise this experience the task of instruction falls upon the pharmacists who employ our young men. You retail pharmacists surely can devote a few moments a day to the education of your apprentices. These young men are not automatons. They are young, eager human beings who wish to improve themselves as retail pharmacists, who want to learn to be a credit to their profession. Encourage them and tutor them in the art of honest merchandising. Someone in the past has similarly assisted you to achieve success. Do as much for your young associates.

PENNY ARCADES

Slot machines of every description have always been used as a magnet to attract young men, and through their blatant claims as tests of luck and skill of manipulation, are bound to fascinate a certain type of adolescent commonly found leaning against lamp posts on busy street corners. Such machines, if not prohibited as gambling devices, are perfectly harmless in their own environment, the penny arcade or amusement hall, but certainly have no place in the modern drug store. Within the last few years cumbersome outfits consisting of miniature baseball, golf, bowling, and various other games have found their way into many of our stores. These machines are designed to capture the odd nickels and dimes which the male customer has jingling in his trouser pockets as he leaves the store, and on the assumption that all of us have some sporting blood in our veins, are usually placed in a prominent place where one either falls over the machine or is jostled by others who are playing with it.

Not infrequently one will find the proprietor or his clerks devoting their spare moments, and spare moments for such a recreation are made, not found, to the pseudo-fascination of the rolling ball-bearings. Perhaps you have even entered the store and found the pharmacist busily engaged in tilting and shaking the table to release the spheres so he can play again free of charge. What a wonderful way for an educated professional man to enjoy himself. The dust on the fixtures, the cigarette stubs on the floor, the sloppy soda fountain and the disgraceful condition of the prescription counter are all of minor importance and are forgotten in the fascination of following the rolling spheres.

Match, peanut, stamp, and cigarette machines are labor saving devices—when they work. Weighing machines, even when dually installed by the bright proprietor who has two of them standing side by side on the assumption that a person will weigh himself on the second machine to see if the first is correct, are pardonable. But, Lord help the so-called pharmacist who clutters up his store with a variety of mechanical junk in the hopes of trapping a few extra nickels.

Such a druggist is the patron saint of the vanishing drug store cowboy, that moronic individual who infests drug store corners, expectorates all over the landscape, curses as though he delighted in smut and whose eyes insult every decent woman who passes within twenty feet of him. The very moment that a group of young bloods begin to congregate in a drug store, the cosmetic counter, the soda fountain, and the prescription practice suffer in consequence of it, and slot machines are certainly a flagrant attraction for fellows with nothing to do but loaf.

Within the last few months quite a number of pharmacists within greater Cleveland have petitioned the Academy of Pharmacy for membership in that professional society. Some were accepted immediately because they were known to be the type of ethical prescriptionists which the Academy needs. Others were not accepted because of the fact that neither they nor their places of business were worthy of consideration. A number of so-called professional stores were beautifully equipped with amusement devices of every description but their prescription departments, their stocks of drugs and chemicals were woefully inadequate. Such a condition kills confidence and creates private depressions often accompanied by the pharmacist's bitter denunciation of his own profession.

A college education is not necessary to run a penny arcade or a novelty shop. If any of you students intend to operate such a place of business after you leave school, do not bother to take the state board. If you should happen to work in this type of store earnestly try to improve it and either educate your employer or strangle him. At any rate, if you don't know any better, please spare the professional pharmacists of Cleveland the irony of an application for membership in the Academy of Pharmacy.

NEW ELEMENT FOUND

Element 87, which is one of two heretofore unknown components of the universe, has been discovered in a substance known as samarskite, a lustrous velvety black mineral found in Norway, Siberia and some of the southern states of this country. It is

worth about \$2 a pound and 2,000,000 pounds of it contain one pound of Element 87. Discovery of Element 87 by Professor Jacob Papish of Cornell University, leaves only one of the ninety-two elements unidentified, that being No. 85.

Element 87 is an insoluble solid and cannot be isolated because of its high inflammability. It has possibilities for use with photo-electric tubes because it is unusually sensitive to light. However, its presence in the sample of samarskite used in the experiments was in such small proportion that Professor Papish was convinced that it will never be abundant. The few milligrams which he obtained in a sulphate compound were said to be virtually priceless.

SYMPOSIUM ON BIO-ASSAYS

By Nertz Vomita, '42

Gentlemen:

No doubt you are aware of the various methods for assaying Digitalis, namely, the One Hour Frog Method, Hatcher Cat Method, Pigeon Emesis Method, Hemmeter's Eighteen Day Giraffe Method, etc. Likewise, too, you are aware of the fallacies in each method. For this purpose Reverend Kostellovitch and myself have collaborated in perfecting what we believe, after careful consideration, experimentation and a La Palina, to be a well-nigh infallible method, which we have chosen to designate as the 35/8 Hour Spider Web Method. The procedure is as follows:

Carefully cleaned spider webs (use Bon Ami) inhabited by one nice fat juicy spider were purchased from the firm of Winton Webb, Webb and Spider Webb Co., Inc. Digitalis, in the form of the non-glucosidal tincture (0.006 cc at a time, please) was used and carefully dropped upon the uppermost fiber. As the liquid touches the thread, the spider becomes alarmed and hastens to another part of the web. The tincture, however, continues merrily on its way, going from thread to thread of the silky structure. After a while the spider becomes exhausted and perspires freely while resting at the very center of the web. It is now that all the tincture converges at a point near the center. The spider, very thirsty due to excess perspiration, imbibes freely in the alcoholic liquid for lack of a coca cola. The result is inevitable. It succumbs. The time involved is about 3 1/2 hours. In the re-

maining 1/8 hour, ash the spider with an acetylene lamp in a gooch crucible, divide your age by the weight of the acid insoluble ash and multiply it by the correct Eastern Standard time. This result is then compared with the ouabain as in the cases of the other methods. The results obtained are remarkably accurate.

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GET AND GIVE AND LIVE

"For what do you live,
For what you get
Or what you give?
Which is the dynamo
That makes you go—
Get or give?

"Get from the world its treasures,
Knowledge, friends and health,
Heap to the full your measures,
God and good and wealth,
But—Get to give.

"Don't be a miser,
A slave to your gold,
Giving is wiser
A hundred-fold
So—
Get and give.

"Get—you must
If you would give;
Give—you must
If you would live;
For getting without giving
Is existence, not living;
Then—
Get and give and live."

—Menthology.

Robert Stockhaus, class of '27, A. M. '31, now in the University of Michigan Graduate School doing work pursuant to his doctor's degree, has been awarded the Stearns fellowship for the furtherance of research in pharmacy. This fellowship, with its stipend of \$500, is sponsored by Frederick Stearns and Company, pharmaceutical manufacturers of Detroit.

FRATERNITIES

RHO CHI

Sigma Chapter of Rho Chi Society recently elected eight new men to its ranks. Marval D. Evans, graduate student and Assistant in Pharmacy, Arthur A. Skolnik, formerly of Ohio State University and a senior at Reserve, Edwin W. Miller, Edward W. Hemmeter, Abe Hirsch, Irwin Boroover, Lawrence C. Scaletta, and Ladimer Yunger of the junior class were this year's recipients of the Rho Chi Key, the highest scholastic honor which it is possible for a Pharmacy student to obtain. These men have shown unusual ability in their pursuit of the pharmaceutical sciences and may well be proud of their achievement. A formal initiation and banquet will be held in the near future. Congratulations, boys. You've been a credit to Reserve and we're proud of you.

ALPHA ZETA OMEGA NEWS

Graduation! The time when the boys don the old black gown and green-tasseled headgear! A march down the campus—a few speeches—then diplomas—all is over. Amongst the boys graduating in June are Fraters Saul Eisenberg, Aaron Cohen, and Samuel Lester. Let's wish them all luck!

With the initiation of Dave Baskind into the Alpha Zeta Omega Fraternity—the number of Baskind brothers has been increased from three to four. They are Harry, Jack, Al, and Dave Baskind. Frater David Goldberg is also a recent addition to the chapter.

Arrangements have been made by Joe Eisenberg, William Kutler, and Ernest Gross for our formal affair to be held at Guild Hall, May 19th. It is to be an elaborate affair and a large attendance by the boys is expected.

Alumni News

Frater Phil Krenitz is now owner of his own store, the Crane Drug Company at 147th and Kinsman.

Frater Joseph Eisenberg is putting in relief work at the Crane Drug and full-time at the Parklawn Drug.

Frater Lou Gressel is owner of the Parklawn Drug.

PHI DELTA CHI NEWS

The Alumni members of Alpha Alpha Chapter have been taking steps to form an active Alumni Association. Meetings of the Alumni every week have been bringing results to forming such an association. The active members of Alpha Alpha take pleasure at this time to thank the Alumni for their cooperation.

We want to congratulate Brother Miller on his good work in school. He recently received an honor key from the Student Council of the School of Pharmacy. He has also received a bid from The Rho Chi Society. Miller is the only Phi Delta Chi member who will take the State Board examination in June. We wish you the best of luck, Ed.

Brother George H. Bruehler has been working hard lately so he will be able to take his State Board Examination sometime in the fall. George received his sweater and numeral for taking part on the School of Pharmacy basketball team. He will probably take part in the other athletic activities during the remaining school year.

Brother Charles R. Bennett is now in Salem, Ohio, working in his father's store. We are very sorry to report the recent death of his father. He passed away on March the thirteenth after being ill for quite some time. Brother Bennett dropped out of school at the end of the first semester because of the illness of his father. We all hope he will be with us again next year.

Brother Armstrong is still working at Streich's Pharmacy at the corner. He now has a full day job which nets him a nice little sum of money each week. He likes to make money in a big way.

Brother Gerber received his sweater and numeral along with Brother Bruehler, for taking part in the basketball activities of the school. He will also take part in the indoor baseball activities which will probably start in the near future. Ken has two more years of school to finish before he will graduate. We wish you the best of luck, Ken.

Brother "Si" Stafford from Xi Chapter at Columbus, Ohio, is now living with us. He is working for the Grasselli Chemical

Company. He graduated from Ohio State University on March the eighteenth, with a B. Met. E. degree. We wish Brother Stafford the best of luck during his days of hard labor.

The game of Ping Pong seems to hold the spotlight at the Chapter House. It is played quite frequently by Brothers Miller, Gerber, Bruehler, and Pledge Bonheimer. Brother Miller and Gerber usually end up in an arguing match after each game they play. The champion around the house seems to be Brother Gerber. Ask Miller sometime just who is the champion ping pong player?

The pledge organization of Alpha Alpha Chapter surprised the actives and Alumni by setting them up to a Smoker. This Smoker was held on the evening of March the twenty-second. We thank them for their fine treat.

KAPPA PSI NEWS

February initiation brought Emery Megyery into our active chapter. Brother Megyery stood the trials of initiation well, and is blossoming forth in the aftermath as a worthy co-worker, promising much for the future of Beta-Beta chapter. The initiation of Brother Megyery brings our active roll to twelve members.

Election of officers was held the week following initiation, and the new fraternal year opens with the following men in office: Regent, Roger K. Lager; vice-regent, Karl W. Schweickardt; Grand Council Deputy, Harry F. Valway; secretary, Edward Hoefler; treasurer, John Morse; chaplain, John Bellan; and historian, Raymond Stemple. Beta-Beta has much confidence in its newly elected officers and is looking forward to a great year.

Beta-Beta Chapter was host to "The Third Annual Convention of The Ohio Chapters of Kappa Psi Fraternity," held here on March 18 and 19. Through the co-operation of Dean Spease the visiting brothers were shown through the School of Pharmacy, The University Hospital's Pharmacy and Dispensary, and the Pharmacy at Cleveland Clinic Hospital. All of our guests were impressed with the school and the pharmacies of the above institutions. Many interesting discussions were heard through the course of our business meetings: each chapter presenting its various fraternal problems. The convention was

officially closed with a banquet held at Green Gables. Dean Spease was the speaker of the evening. He delivered a very interesting and stimulating talk on pharmacy. After "conventioning" for the greater part of the night, the brothers returned to their respective chapters. Beta-Phi Chapter will be the host of the 1933 convention in Cincinnati.

A benefit bridge party was held at the chapter house on Friday, April 8. The party was in charge of a committee headed by Brother Obester. The proceeds will be used toward buying new furniture for the house.

Every Kappa Psi man is looking forward, and working to the Nth degree to make our Annual Spring Formal the best that has been held in Beta-Beta's history. The Seaglade Room at the Lake Shore Hotel is the place. Friday, May 6, is the date. Music will be furnished by a local nine-piece orchestra. Arrange to spend a gala evening with your fraternity brothers.

ALUMNI NEWS

Brother Aldrich is working for the Marshall Drug Company at West 117th and Lorain.

Brother Wolfert was with us at the bridge party. Let us see more of you, Ott.

Brother Cole of Beta-Lambda chapter was a recent visitor to the house.

Brother Brysacz recently purchased another drug store.

Brother Cullinen is working for McKesons in Akron.

Brother Hunt is managing the Marshall Drug Store at East 55th and Broadway.

Brother Robert Murphy of Beta-Kappa chapter visits us quite frequently. He is working for Standard Drug in Willoughby.

Yates—"Well, how did you find yourself after the party the other night, Jim?"

Crutcher (in a whisper)—"I just looked under the table and there I was."

—The Huntington Banker.

R

We quote the utterances of four persons of different degrees of education and greatness as they gazed into the Grand Canyon:

Theodore Roosevelt—God Almighty made the Grand Canyon. Man cannot even make the words to describe it.

An author—It bankrupts the English language.

Girl from New Jersey—Golly, wot a gully.

Cowboy—It shore is a _____ of a hole.

—Wall Street Journal.

EXPRESSED OIL

Not So Fresh, Either

Hubb: "Well, I guess I'll go out and get a breath of fresh air."

Wife: "If it's the same as you got last night, you'd better stay home."

¶

Tom: "My instructor told me I rode as if I was part of the horse."

Pal: "Did he tell you which part?"

¶

Planning a Surprise

Wife: "I want a revolver, for my husband."

Clerk: "Did your husband say what kind of revolver?"

Wife: "No, but I don't think that matters. You see, he doesn't even know I'm going to shoot him."

¶

Mrs. Gee: "Harry, how do you suppose those dozens and dozens of empty bottles got into our cellar?"

Mr. Gee: "I'm sure I don't know, love. I never bought an empty bottle in my life."

¶

The absent-minded professor met his son in school one morning and said: "Good morning, John. How's your father?"

¶

For An Impression

Mr. Pewee: "Why did you get me such big shirts? These are four sizes too large for me."

His wife: "They cost just the same as your size, and I wasn't going to let a strange clerk know I married such a shrimp as you."

¶

So It Seemed

The teacher was putting questions to the class.

"What do we call a man," he asked, "who keeps on talking and talking when people are no longer interested?"

"Please, sir," replied a boy, "a teacher."

—Hyde Reporter.

¶

It was getting along toward evening, but still on the bank of a stream sat a patient angler who had been occupying that seat wholly unrewarded ever since early morning. He had not made a single strike, let alone a catch.

Along came a small, irrepressible youth, the sort that should be strangled at birth, and his mother. On catching sight of the fisherman, the child immediately shrilled:

"Hey, Mister, I wanna see you catch a fish. Mister, catch me a fish."

"Mister," broke in the mother, "don't you do it. Don't you catch him a single fish till he says please."

—American Legion Magazine.

¶

A male stenographer hit by a bullet, thinking he was mortally wounded, whispered to a friend:

"Write to Josie. Give her my love, and tell her my last thoughts were of her. Carbon copies to Sadie, Stella and Kathleen."

¶

Teacher—"Who can tell me what the former ruler of Russia was called?"

Class (in unison)—"Czar."

Teacher—"Correct, and what was his wife called?"

Class—"Czarina!"

Teacher—"Correct, and what were the czar's children called?"

A pause, and then a small, timid voice piped up: "Czardines?"

¶

Father—(awaiting the news)—"Well, nurse, will it use a razor or a lipstick?"

¶

"Why are you so pensive," asked the widower.

"I'm not pensive," she replied.

"But you haven't said a word for twenty minutes."

"Well, I haven't had anything to say."

"Don't you ever say anything when you have nothing to say?"

"No."

"Will you be my wife?"

¶

Mrs. Highbrow—"Does your son keep a diary while at college?"

Mrs. Putton-Ayres—"Yes. He saves all his check stubs."

¶

Mother—"Mabel's young man has taken offense at something. Have you said anything to him?"

Dad—"Not a word. I haven't seen him since I mailed him our electric light bill for last month."

—News.

¶

A man was buying a suitcase, but none of those shown pleased him at all.

"When I buy a bag," he declared, "I like to see some cowhide in it."

"Oi," said the dealer, "you should want tricks, am I a magician yet?"

¶

Hard Boiled Grocer—"No, sir! no checks! I wouldn't cash a check for my own brother!"

Disappointed Customer—"Well, of course, you know your family better than I do."

—Arcanum Bulletin.

¶

On this trip the crack express had not been living up to its reputation. First it would go forward fifty yards or so, then back, then standing still, puffing uncertainly, and then begin the same thing all over again. At last one of the travelers lost patience and summoned the porter.

"What's the matter with this train?" he exploded. "Backing up and jerking forward in this awful way."

"It's quite all right, sir," the porter assured him. "I think the engineer is teaching his wife to drive."

¶

Householder (hearing noise downstairs)—"Who's down there?"

Burglar (with great presence of mind)—"This is station KDKA now signing off until tomorrow morning at eleven o'clock. Goodnight, everybody."

—Clipped.

R

My Daily Creed

Let me be a little kinder,
 Let me be a little blinder
 To the faults of those about me,
 Let me praise a little more.
 Let me be when I am weary, just a little bit
 more cheery,
 Let me serve a little better, those that I am
 striving for.

Let me be a little braver, when temptation bids
 me waver,
 Let me strive a little harder to be all that I
 should be,
 Let me be a little meeker to a brother that is
 weaker,
 Let me think more of my neighbor and a little
 less of me.

R

Tuning in on Heaven

"We haven't any really constructive suggestions
 for our tendencies to leave the straight and nar-
 row path, but we think an amplifier for the voice
 of our conscience wouldn't do any harm."

—*Boston Herald.*

R

"Was your last mistress surprised at your
 leaving?"

"Oh, no, ma'am! She knowed it befo' I did."

R

"What's the difference between castor oil and
 whiskey?"

"Well, if you must know, one is a movie and
 the other is a talkie."

—*Skull and Bones.*

R

Pastor: "Good morning, May, I hear God has
 seen fit to send you two little twin brothers."

Little May: "Yes, sir, and He knows where the
 money's coming from, too, I heard daddy say so."

—*Skull and Bones.*

R

Cooperation

Two fool jackasses, say—Get this dope,
 Were tied together with a piece of rope,
 Said one to the other, "You may come my way,
 While I take a nibble of the new mown hay."
 "I won't," said the other; "you come with me,
 For I, too, have some hay, you see."
 So they got nowhere, just pawed the dirt,
 And Oh, by golly, that rope did hurt.
 Then they faced about, these stubborn mules,
 And said, "We're just like human fools;
 Let's pull together; I'll go your way;
 Then you come with me, and we'll both eat hay."
 Well, they ate their hay, and they liked it, too,
 And swore to be comrades good and true.
 As the sun went down, they were heard to bray,
 "Ah, this is the end of a perfect day."

R

He—"Yes, it was a good idea to get a cat to
 clean out the mice. But why did you pick out a
 Tomcat?"

She—"Why I thought a female cat would be
 afraid of mice."

ALUMNI NOTICE!

Plan to attend the Phar-
 macy School Alumni
 Banquet on the evening
 preceding Graduation
 Day—June Fourteenth,
 1932, at the Shaker
 Heights Country Club.
 Further information in
 regard to this affair will
 be mailed to you early
 in June.

Remember the Date**Tuesday****June Fourteenth****1932**

Pharm

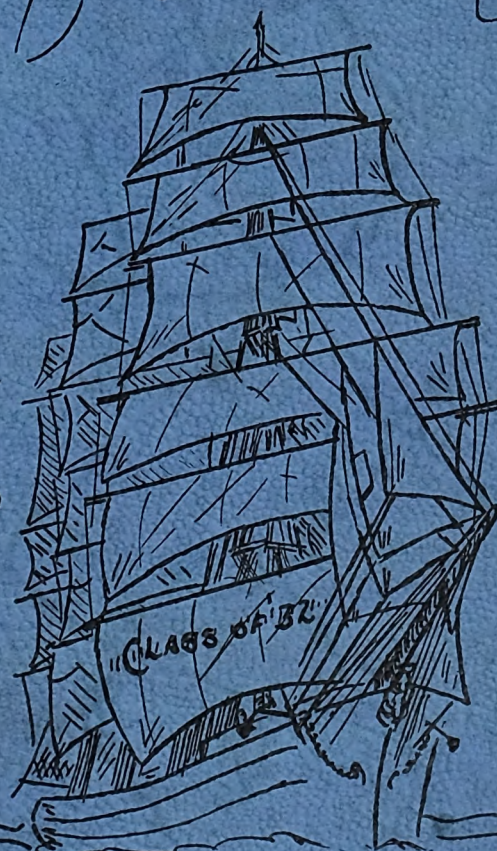
The Review

Pharmakon

Vol. 6

JUNE, 1932

No. 3



GRADUATION NUMBER

E.G. THOMAS

MILLER DRUG STORES

CLEVELAND, OHIO

Ethical Prescriptionists

12435 Cedar Road

10657 Euclid Avenue

1123 Euclid Avenue

13112 Shaker Blvd.

3328 Carnegie Avenue

L. P. Miller '17

Geo. Miller '22

CALL US—WE DELIVER

THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

THE REGULATION OF DRUG STORE EXPERIENCE*

The type and amount of experience in drug stores which shall be exacted of those who seek to enter the profession of pharmacy has long been a subject for debate in the meetings of the various groups interested in the training and licensing of pharmacists. Nearly everyone, probably, will agree with the statement that most of the non-professional training, so essential for successful contact with the public, must be obtained in the drug store. In no other way can the young man be put at ease in his surroundings and given that degree of confidence and self-assurance so useful to one who has to deal with a critical and sometimes unsympathetic public. Then, too, the feeling of real responsibility, in relationship to both the public and the profession, is most effectively acquired in a genuine drug store atmosphere where the stern realities of serious business are likely to have greater influence in this important respect than any academic precept offered in the class room.

In any discussion, then, of the subject suggested by the title of this paper, there is to be no question raised as regards the desirability or usefulness of drug store experience. It is to be accepted as an apriorism so far as pharmacy registration prerequisites are concerned. And this statement is made in spite of the fact that the State wherein this meeting is being held does not require any experience of one class of candidates for registration. Ohio's deviation, from what appears to be the accepted policy of the National Association of Boards of Pharmacy since it adopted a resolution to require at least one year of practical experience in addition to the four year college

course in pharmacy, should be remedied for the sake of uniformity and a smoother working system of national reciprocity.

However, agreed as we seem to be upon the usefulness and worth while training of practical experience as a prerequisite to registration, it appears that we are not agreed upon "when", "where", and "how", this experience shall be gained. Is it to be gained before entering college, during the college course, or after graduation? Is it to be gained in any type of so-called drug store, ranging from the packaged nostrum and novelty type to the exclusively professional type? Is it to be gained under a standardized system in charge of inspectors appointed by the State Board of Pharmacy? Is it to be directed by a pharmacy college? Or is it to be regulated by a professional society organized for the purpose of furthering the interests and ideals of professional pharmacy?

The arguments in favor of accepting and encouraging drug store experience that has been gained previous to the time of entering college, which, for the most part, applies to those plastic, formative years ranging from fourteen to nineteen, are sound in many respects. In the first place, the method is historically vouched for. It has long been practiced in many European countries where pharmacy ranks relatively high with the learned professions. While it is true that modern American methods are somewhat removed from both the spirit and body of the old conventional apprenticeship system, it frequently appears that the change has worked a distinct loss in regard to the personal satisfaction one enjoys when properly fitted into his life-work. If a like or dislike is created for an activity during apprenticeship days, and, of course, this is likely to be the case, a young man will more surely adjust himself to better advantage, as

*A paper read by Prof. N. T. Chamberlain before the District Meeting of Pharmacy Boards and Faculties, Cleveland, April 28, 1932.

regards both himself and the activity he hopes to enter. Furthermore, most teachers of practical pharmacy will admit, I believe, that bona fide drug store experience does help in shortening the line of least resistance insofar as some of the laboratory instruction and many of the problems related to practical pharmacy are concerned. Anyway, the student with drug store experience has not lost anything needed for a better understanding of his school work; invariably he has gained something.

With the advent of the four-year college course, it should be possible for the experience requirement to be fulfilled to a large extent, if not completely, while the student is in college; certainly not later than three months subsequent to his graduation. It would seem unjustifiable to require a young man to put in a whole year of experience after graduation when he has had, perhaps, a year or more of experience before and during his college course. If some kind of efficient direction or supervision can be worked out, as will be suggested later, it is undoubtedly true that a minimum, say of two thousand hours under regulated conditions will be more effective and profitable towards the student's practical training than twice or three times that number of hours put in under present haphazard conditions of apprentice employment.

In the matter of "where shall drug store experience be gained?" I propose to limit myself to narrow confines, viz.—the type of store to which should be confined the work of apprentices that is to be accepted by Boards of Pharmacy as satisfying the requirements for registration. Let us note the fact that the sole purpose and function of pharmacy registration is the protection of the public against the irresponsible handling of medicines and poisons. We must not overlook the fact that the State is not interested in the registrant's ability to conduct a drug store successfully from a business administration viewpoint. There is no more reason why the State should set up an elaborate bit of governmental machinery in order that drug store business proprietors may have better trained young men to do their work than there is that the State should do the same thing for any other business undertaking. Desirable as it is

that the young pharmacist know and understand the business principles of drug store operation and management, there is hardly sound argument for State Boards of Pharmacy to interest themselves in such matters except by ignoring the functions for which they were originally brought into being.

With the above considerations in mind it becomes obvious that only those stores in which the professional and bona fide drug business represents a very considerable portion of the total income are suitable as places to satisfy the experience requirements. However, the right kind of commercial business carried along with the above, should not be derogative to a good prescription practice, provided the proprietor has ideals in the field of professional ethics and does not subordinate his professional practices to his commercial activities. It should be needless to mention that facilities for carrying on a professional business must be on hand in all cases, and the minimum requirements definitely laid down so as to preclude misunderstanding. These specifications should, of course, mention presence of registered men at all times, nature and type of equipment and facilities, amount of professional business and absence of the punch-board type of merchandizing features. Closely connected with these considerations stands the hospital pharmacy. Experience gained therein has much to offer of value along the line of professional attainments and it seems quite logical that some fractional part of the experience requirement might well be acceptable if offered from this field. The value of hospital pharmacy experience lies in the contacts established with the methods and trends in the various fields of medical and nursing practice. Here, the student will observe to best advantage how modern detail methods bring about the fruition of the aims of medicine mechanizers and some direct familiarity with these considerations should enable him to more successfully chart a proper course in retail pharmacy, or in any other branch of the profession.

Any attempt on the part of State Boards of Pharmacy to regulate experience requirements by standardizing the type of drug store in which experience may be gained, legally, appears to be rather hazard-

ous. Without going into a discussion of the many difficulties to be encountered, a few remarks concerning two of the complications sure to occur, justifies this prophecy, I believe. In the first place, the classification and selection of a standardized type of store wherein the apprentice would receive some professional experience, as well as diversified commercial experience, would be a perplexing problem for State Boards of Pharmacy as now organized, since political interference from time to time would upset definitely established policies for ethical advancement. Secondly, the expense involved in the support of a widely extended personnel beyond that already employed, would necessitate a greatly increased revenue, and most State Boards are already cramped in this respect. In view of these considerations it seems rather questionable whether State Boards, functioning as the instruments of State pharmacy laws, can very much improve the present condition of affairs.

The question may well be asked: What contribution, if any, can the Pharmacy Colleges make toward better experience requirements? Obviously, whatever constructive efforts the Colleges might exert in the matter would be limited, principally, to the territory from which they draw their students. Assuming that the experience gained during the four years in College is to count as legal experience, it should be possible for the College to establish a liaison with the better stores of the ecommunity so as to mutually benefit both the practitioner and the student. In addition, the Colleges, by further strengthening their courses in dispensing practice and, perhaps, in commercial pharmacy, might more effectively give a practical slant to their instructional efforts. A model drug store, as part of the College equipment, might be more than a mere plaything if not depended upon except as an idealized set-up from the professional viewpoint. It is true that any arrangement entered into between State Boards and Colleges on the one hand and Drug Store Proprietors and Colleges on the other, for the purpose of improving experience requirements, is bound to be fraught with the usual dangers of misunderstanding. Especially would this be true when the student

is injected into the situation and thereby completes a triangle on one side or the other. Nevertheless, if Colleges are what they should be, it seems that no better organization exists at the present time for handling such a problem in a tactful and unbiased way. Surely, the Colleges located in the larger centers of population would have a large enough field of operation to carry out such a plan effectively.

There is one other factor, it seems, deserving of attention in any discussion affecting the regulation of drug store experience requirements. I refer to the Professional Society, organized for the purpose of establishing ethical standards and promoting a bona fide professionalism among its members. Experience has shown that the ultimate unit, i. e., the locally organized group, when aggressively officered, is decisively efficient in matters pertaining to the good and welfare of a practicing profession. Both the medical and legal professions offer numerous examples throughout the nation to substantiate this statement. Academies of Medicine and Bar Associations have been most effective in their influence for good on their respective memberships. There seems to be no good reason why Pharmacy should not avail itself of this same expedient. If commercial and merchandizing activities are kept reasonably subservient to professional affairs—and in their own proper sphere—the public will come to associate Professional Pharmacy with real Health Service, where it properly belongs. No heterogeneous pharmacy organization can be expected to accomplish much along this line. From the beginning, the organization must be sold on professional pharmacy and each member desire to belong because it is professional. If members lack professional ideals it is too big a job to convert them. The only hope of success for the organization lies in its inherent professionalism. By example, rather than by precept, must the Professional Pharmacist work out his salvation.

In every large center of population there is ample room for organizing a Professional Pharmaceutical Society. One hundred or more stores within one hour's driving radius should be able to muster a score or more of Pharmacy proprietors or their representa-

tives. Such a workable group can sponsor a professional activity that will very soon attract the attention of the medical profession and the general public. In Cleveland it has taken three years to reach an approach to success, but it must be remembered that a lot of pioneering had to be done. Here it was not possible to start with standardized requirements as regards store equipment and personnel. Personal inspection by a Committee that necessarily temporized according to its members' personal dictates of conscience had to take the place of carefully thought-out and written down requirements. This defect, it is hoped, will be remedied shortly. With these things in mind there appears to be justification for suggesting the stores of professional society members as proper places in which experience requirements may be satisfied. State Boards, instead of attempting to standardize stores for experience requirements, would determine only, whether the various professional societies were worthy of the name. Most Pharmacy Colleges are located in or near the larger centers of population, so it should not be difficult for students to get a year of experience in the stores of proprietors who have a real interest in genuine pharmacy, as evidenced by affiliation with the professional group and working to uphold the tenets of professional practices. Such experience, directed and supervised through the cooperative efforts of the Pharmacy Colleges and Store Proprietors, should have far more merit than the average kind of experience now obtained. The Professional Societies will, I believe, welcome cooperation with the Pharmacy Colleges and the latter will find a worth while outlet for their efforts in a professional way as regards both students and drug store proprietors.

No doubt some Board members will be inclined to raise the question of their legal right to recognize Professional Societies for the purpose herein indicated. In Ohio, for instance, the Board has but little discretion, under the present law, as regards the standing of Schools of Pharmacy. Therefore it is not in a position to dictate a policy of cooperation between the Schools and Professional Societies in such a way as to meet its desires in the matter. In other words,

the State Pharmacy Board lacks the prerogatives vested in the State Medical Board. The latter Board is given wide discretionary powers in determining the standing of Medical Schools and can, therefore, set up its own standards to a large degree. Similar power vested in the Board of Pharmacy in Ohio, and other States not already having it, might well be sought in future legislation. However, it seems hardly possible that any worth while Pharmacy School would stand in the way of a State Pharmacy Board that might seek to solve the problem of regulation by availing itself of the help to be offered through the possible cooperation between Schools of Pharmacy and Professional Societies.

TO THE GRADUATES, GREETING!

If a trace of anxiety mingles with the felicitations extended to the students who finish their formal education this year, that should evoke neither wonder nor blame. It indicates only that the well wisher is not unaware of what is going on all about him and that, if anything, he is more fond of young people than those who would thoughtlessly or insincerely tell them that now the world is their oyster for them to open at will.

To become a producer and to make one's place in the work of the world has never been easy and is not easy now. As regards young pharmacists, their chances for finding work at subsistence wages are as good or better than are the chances of those now seeking other work. This, although true, does not leave out of account the fact that the young man or woman just out of college who gets a job promptly is fortunate.

Though realizing of how little worth unsolicited advice is said to be, I still venture to set down for the consideration of these young friends a very few bits of counsel which I think will prove useful. Here they are: If possible work for several employers in the next few years and save some money. Five to eight years' experience before considering going into business for oneself is none too long. Don't stay long with an employer whom you cannot admire both for

ability and character. Count yourself lucky if you are made to work hard, providing that your boss also works hard and intelligently. Remember that honesty does not imply stupidity nor shrewdness trickiness.

I have also observed that good druggists do not usually have the gift of gab, that they are not habitual chair warmers and that their prescription rooms are presentable. Almost invariably, too, successful druggists like the business. Their liking for the business is, I should say, rather more a condition for success than a result of it.

This brief homily ended, I greet heartily the young men and women about to enter Pharmacy. We of the older generation, all of us, wish them all possible success. Theirs is an arduous and confining vocation, but in conclusion, I would have the young people about to enter the business share with me the belief that trying as present conditions are, given good health and ordinary judgment based on sufficient experience, a good living may still be had out of the retail drug business and beyond that such satisfaction as there is in having an honorable occupation that has been indispensable to mankind since before history was recorded and is likely to remain so indefinitely.

Carl Winter

ALUMNI SMOKER

The School of Pharmacy Alumni Smoker at the Hotel Allerton on May 17th was the most successful affair of its kind ever held by our Alumni Association. A very large crowd of Reserve graduates was present and everyone seemed to be having a marvelous time. There were bridge, poker, pinochle, and other types of card games galore.

The luncheon couldn't have been better and the entertainment, well, just ask Dr. Bacon about that. The crowd was the jolliest and friendliest we've seen since the school dance last February, and we all hope that the Association will make the Smoker an annual affair.

Mr. Walter F. Wargell and Mr. Roy I. Scott are to be recommended for the way in which the party was managed. The Alumni Association is certainly fortunate in having such an enthusiastic group of officers.

CASTILE SOAP DECISION

The U. S. Circuit Court of Appeals for the 7th circuit has rendered a decision which reverses the order of the Federal Trade Commission requiring that manufacturers cease and desist from the use of the term castile soap to designate soap made from fats other than olive oil. This is the Kirk case which has long been pending. The court said in part:

"The government, through its agency the Bureau of Standards, has thus committed itself to the proposition that castile soap may be made of oily and fatty elements other than olive oil. Being solely a question of fact we deem it expedient for other departments of the government, including the judiciary, to accept such construction, if for no other reason than that of consistency."

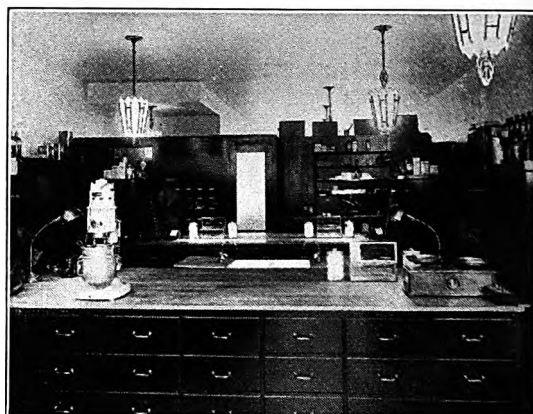


A TRULY ETHICAL PHARMACY

The Kurtz Pharmacy on Detroit Avenue represents about the highest type of professional pharmacy in Cleveland. As a slogan this store has adopted the phrase, "The Persistently Ethical Drug Store," and the firm has certainly lived up to the high standards which it has set for itself. Here one will not find a soda fountain or candy counter, neither can one purchase cigars, toilet articles or patent medicines. Counter prescribing is absolutely taboo, as one would expect, every effort being concentrated up-



RECEPTION ROOM



PRESCRIPTION LABORATORY IN KURTZ PHARMACY

on one thing, the skillful compounding of prescriptions with carefully selected materials. Products of the highest standard only are used in the prescription laboratory and every prescription leaving the store has on the label the State certificate number of the registered pharmacist who filled it.

The Kurtz Drug Co. carries a complete stock of biologicals which are automatically kept at a constant temperature to insure prolonged effectiveness. Due to the short dating on most biologicals this is a most essential factor. A large variety of items for the sick room and supplies of every description for the physician are to be found in the beautiful reception room of the store. Kurtz has an excellent delivery service and due to the utmost consideration and attention which is paid to every delivery order the prescription business has increased appreciably in volume.

This is the type of store which cannot but instill pride in our profession. The Academy of Pharmacy is working hard in an earnest effort to promote professional pharmacy as carried on by the Kurtz Drug Co. and we hope to see many more such pharmacies in the near future. The sooner all our professionally inclined pharmacists cooperate with the Academy, the sooner will material progress be made in this direction.

COLORIMETRIC DIGITALIS ASSAY

Abe Hirsch recently ran a series of colorimetric digitalis assays in Dr. Bacon's Pharmacology class. Using a Duboscq Colorimeter, Hirsch obtained results which checked quite closely with those obtained in the bio-assay. This method simplifies the digitalis assay a great deal, can be run quite rapidly and does not require any special training on the part of the operator.

WHY CANDIDATES FAIL TO PASS STATE BOARD EXAMINATIONS

By A. L. FLANDERMEYER

President of the Academy of Pharmacy and Late
Member of the Ohio State Board of Pharmacy

At first glance the above subject seems easy to dispose of by placing all the responsibility upon the student, who has no voice in this conference of Boards and Colleges. On studying this subject it seems to me that while the student may be to a greater or lesser extent liable for his own failure, the Colleges, and, in some instances, the Boards must shoulder part of the blame.

While I am offering criticisms I am mindful of the fact that a conference, such as this, should be for constructive effort and not merely fault finding. I realize that perhaps I am a little severe upon the colleges, but my information is fairly authentic from long association with students and candidates who come before the Board of Pharmacy.

Insofar as the Boards of Pharmacy are concerned I do not believe they should be blamed very much for failure of candidates who come before them, just so long as they do not overstep their authority, namely, to protect the public and provide for pharmacists of quality and not quantity. The charge has been made, that Boards are not consistent with applicants for reciprocity, namely, in times of distress, members take the attitude that they must in a way protect or limit the number of pharmacists who may be licensed. This is purely a function of our legislative bodies and the Boards should not assume the power of the legislator. Boards have been blamed for having obsolete questions, etc., but this is merely a matter of opinion. Drugs have not changed since Adam, true, new ones have been discovered and new processes in chemistry have been developed, but after all very few new discoveries affect the average drug store or prescription pharmacy in actual practice, therefore the old questions are just as good as the new ones.

The percentage of failures of candidates who appear before Boards of Pharmacy in different states, is between 30% and 60%. This percentage seems rather large when one considers the educational facilities the student has at his command. The student of today has 3 or 4 years of intensive college training in pharmacy and allied sciences and perhaps some store experience. During his stay in college he is given not only comprehensive training in the class rooms, but as well, laboratory instruction and in some cases actual experience in the dispensaries of the University and is required to maintain his scholastic standards in order to receive a degree.

Granting the above to be correct, we wonder why some are able to make good while others are not. It perhaps involves the per-

sonal element to a great extent. A lack of ordinary common sense upon the part of the student sometimes results in the collapse and failure of the candidate when appearing before the Board. In some cases the student is unable to logically employ his text book knowledge and as I said a few years ago to a class of students at Reserve, unless they are prepared and able to make use of the knowledge they receive in college and elaborate upon it by outside study they will be disappointed, for after all the education received is only a foundation upon which they are expected to build.

Many an intelligent student has not the ability to apply his education to actual pharmaceutical practice. He relies too much on his memory and when a new demand is made upon him, his resources fail him, because he does not attempt to reason by analogy or correlate the unfamiliar circumstance with similar established data. Board members are familiar with the different types of candidates appearing for examination. We have the good, the bad, the lucky, the fearful or nervous, and the nervy ones.

The fearful student is the one who usually works himself into such a state of mind as to be unable to give a good account of himself and he, above all the others, is a problem for both the college and the Board of Pharmacy.

Inability to recognize and concentrate upon important subjects, lack of experience with practical problems, fear of failure and, above all, lack of confidence in his own ability to cope with the subject are the outstanding causes of most failures.

To the colleges I would say that when an excess of theoretical ramifications are introduced at the expense of fundamentals it is bound to reflect itself in the student.

Time spent in theorization might well be spent in the application to actual and practical pharmaceutical problems. In some schools actual related subjects to pharmacy have been discontinued and such things as analytical geometry have been substituted. Pharmaceutical mathematics, always a bugbear with the applicant, should have more time in the schools.

The source, preparation, and uses of many of our inorganic chemicals used in the drug store has taken a back seat in favor of

physics or psychology. Where the student is sorely pressed for time I believe the related subjects to pharmacy should be given preference over the unrelated, even though these unrelated subjects help to broaden the mind of the student and in the future become a valuable asset to him.

It should be the aim of every College of Pharmacy to develop efficient pharmacists, men and women who are skilled and who instinctively work with accuracy and dispatch. Sometimes this aim is lost sight of in getting a volume of students. A little more application of the law of the survival of the fittest, a little more time and effort spent in building a personal confidence and above all resourcefulness, developing in the student the ability to think instead of relying so much upon his memory might decrease the number of applicants, but would surely increase the calibre of those who survive and the problem of failures would be eliminated.

Going back to the State Boards I would say that we should not neglect to keep up to date. The bulletins issued by the Committee of the N.A.B.P. are very helpful and should be studied by Board Members, the little time and effort which is required to comprehend the subjects outlined will benefit members in preparing questions more in line with what the student is receiving in his training at college and if he is at all a normal student he will experience little difficulty. If he is not capable, the college has erred in not eliminating him long before the State Board examinations.

NEW PHARMACON EDITOR

Gustav Kostell who will be classified as a senior next year was recently elected by Student Council to be the new Pharmacon Editor. Gus already has an A. B. degree from Adelbert College and receives his Ph. C. degree from the School of Pharmacy this year. He has almost enough credits for his master's degree and will undoubtedly complete the requirements in 1933.

During the past year he held the office of Vice-President in the Student Council

and recently was awarded the Honor Key in recognition of his school activities. Here's to you, Gus. Good luck with the Pharmacon. You've accepted a real job. Do your best with it as you have with everything else in the past.

George Gerlach, the present Editor of the Pharmacon, has enrolled in the Reserve School of Medicine. Some people do not know when they have enough, do they? Good luck, George, but if we ever catch you prescribing a proprietary you had best leave for Mongolia before we catch you.

GOVERNMENT GUIDANCE LEAFLETS FOR PHARMACY

By addressing the Superintendent of Documents, Washington, D. C., and enclosing five cents one can now obtain any one of a series of leaflets on college counseling and advising for the professions; what the occupations are; what preliminary education is required; where professional training is offered; length of training; student budgets; and selected references. The series is designed for the use of high-school and college students, orientation classes, guidance committees, counselors, teachers, and parents.

Pharmacy is the subject matter of Leaflet No. 14. After a brief discussion of the historical background upon which modern Pharmacy is founded, the basic qualifications for those who take up Pharmacy as a career are set forth.

Under "Opportunities" the following comments are made:

Ninety per cent of the graduates of colleges of Pharmacy enter employment in the drug stores and pharmacies where they may become proprietors, branch managers of chain stores, assistants, chemists, research workers, etc. Private ownership of a drug store is profitable when the location is chosen with consideration for population, trade, competition, etc., and business principles applied. Hospitals provide pharmaceutical departments in charge of pharmacists. Manufacturing plants and industrial laboratories employ pharmacists for control

and research work involving medicines, drugs, cosmetics, vaccines, and similar products. The Federal Government employs many pharmacists. The inspection service (Treasury Department) of the Industrial Alcohol Bureau and of the Narcotic Bureau employs pharmacists that do not practice their profession, but **must be trained** in pharmacy. The Parker Public Health Act (46 Stat. 150), enacted by Congress and signed by the President on April 9, 1930, authorizes the President to appoint pharmacists as commissioned officers in the Public Health Service in the grade of assistant surgeon, corresponding to first lieutenant in the Army. Ten of the 26 pharmacists in the Public Health Service have been so advanced since 1930.

The preliminary report of the United States Personnel Classification Board places pharmacy in the professional and scientific service, where heretofore it has been classified in the subprofessional service only. Legislation was pending before the last Congress to commission pharmacists in the United States Veterans' Bureau and to create a pharmacy corps in that bureau as well as to organize a pharmaceutical corps in the United States Army. As the educational requirements for entering the profession of pharmacy have increased, there has been a corresponding recognition on the part of the Government of the professional qualifications of pharmacists.

ALUMNI

All of our Alumni who are members of the N.O.D.A. should have received a notice of the District No. 3 Conference of Pharmacy Boards and College Faculties held in Cleveland on April 28th and 29th. A brief article on this meeting appears elsewhere in this issue.

It seems that the N.O.D.A. Board of Control, at its meeting April 15th, passed a motion directing that a letter be sent "to every drug store calling attention to the conference, stating its purpose and pointing out especially that they are welcome to attend the sessions and participate in the discussions."

Because of some unfortunate occurrence, the letter, obviously, was not sent and an opportunity was lost, for those interested, to participate in a meeting that was intended to be helpful for every retailer who has the best interests of Pharmacy at heart.

DISTRICT MEETING OF BOARDS OF PHARMACY AND PHARMACY FACULTIES

A joint meeting of the Boards of Pharmacy and delegates of the College Faculties belonging to the American Association of Colleges of Pharmacy representing the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, and Kentucky was held at the Cleveland Club, April 28 and 29.

The program included papers on the various problems that confront State Pharmacy Boards and Pharmacy College Faculties. Marginal activities included trips to the pharmacies of Lakeside and City Hospitals, the Cleveland Clinic, and the manufacturing and dispensing departments of the School of Pharmacy. One forenoon was spent at the Squire Valleeve Medicinal Plant Garden which is being rapidly developed into one of the finest of its kind through the cooperation of our School and the generosity of Mr. Andrew Squire of Cleveland.

The first day's afternoon program was followed by a dinner sponsored by Western Reserve University, at which Dr. W. G. Leutner, Dean of Administration, addressed the members on the function of pharmacy in a Public Health Service Program. The dinner was followed by an evening business meeting for the members and a bridge party for the ladies present.

NOT A BAD HABIT

Going to Reserve School of Pharmacy seems to have become a habit with some of Cleveland's druggist families. To date, the Gerlachs apparently hold the record, five brothers having graduated from this school in the past twenty years. The Baskinds are not far behind with a total of four boys who are all making a go of it.

The Reserve Pharmacan

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

Editor -----GEORGE GERLACH, '32 Business Manager -----TED GUTKOWSKI, '34
Art Editor -----E. G. THOMAS, '34 Faculty Adviser -----PROF. N. T. CHAMBERLIN

REPORTORIAL

John Beilan, '34 Maurice Finberg, '35
Norman Fretthold, '35

BUSINESS

Karl Schweickardt, '32 John Obester, '32
Vera Sonich, '35

Vol. 6

WESTERN RESERVE SCHOOL OF PHARMACY

No. 3

Cleveland, Ohio

June, 1932

EDITORIALS

Cutting classes seems to be a favorite pastime at Reserve as at most of our large universities. Why a student will pay good money for the privilege of coming to college and then consider it smart

or clever to cut whenever possible and do no more than the minimum amount of work required is an old, old mystery. How many of us would get a big thrill out of putting a match to a dollar bill two or three times a week, particularly now, when many people wonder whether dollar bills are still being made. That is exactly what you do every time you cut a class. If you will just sit down and calculate the cash value of one hour lecture and take into consideration the fact that the work you missed must be made up sooner or later, you will find that it totals approximately one dollar per hour.

Few, if any, students believe in compulsory attendance at classes. Neither do most of us believe in limited numbers of absences from classes. If attendance were left entirely up to the student, cutting, as such, would gradually disappear. If a student can really master a subject as evidenced by his ability to discuss it intelligently and pass any examination in it and still attend only fifty per cent of the lectures

or recitations, well and good. Needless to say, such a student would in most instances be required to devote much more outside effort to the subject than if he were to attend all the class meetings. On the other hand, students who cut class frequently and do not compensate for it outside, would rapidly be eliminated because of their inability to produce results. If class attendance were made optional, the "kick" which accompanies cutting in the minds of many would be missing and the situation would shortly remedy itself.

In connection with this subject we wish to express the opinion of at least ninety per cent of our student body on the matter of compulsory assemblies. Attendance at these

ASSEMBLIES

weekly convocations is enforced by means of threats of K. P. duty for any one who cuts. What a childish manner of insuring an audience for our assembly speakers. The very fact that attendance is required makes the meetings distasteful and makes the audience generally inattentive. In addition, however prominent or well educated the speakers may be, only one out of every five or six is able to arouse any interest or kindle

any enthusiasm in his listeners who sit there impatiently awaiting their dismissal so they may rush to their belated dinners. True enough, we are here to obtain a general education, but if we must have assemblies, why not try to make them attractive for us by selecting professional scientific speakers who have at least something in common with our interests.

The present Pharmacon staff favors the abolition of compulsory assembly attendance. If this is not possible, at least why not have our assemblies some other time besides during our lunch hour. The hour at which they are held could be changed every week so that the same classes would not be affected too often. If they are worthy of being continued at all, they ought to be worthy of this small sacrifice on the part of our instructors. We have considerable talent in our student body. How about permitting the students to take charge of every other assembly? It would be a change, perhaps for the worse as far as theoretical benefit is concerned, but for the better in so much as personal student interest in convocations is concerned.

Final examinations are the bane of every college student. We often wonder if our faculty realizes what a severe, unnecessary mental and physical strain it is imposing upon us twice a year.

FINALS

We'll grant you that examinations are necessary to determine whether or not the student is mastering or at least absorbing a sufficient quantity of his work, but, weekly or bimonthly tests are a far better criterion of the knowledge gained by the student as he progresses than a single marathon final at the end of the semester. These weekly quizzes would keep us on our toes throughout the year and we could not help but learn something as we went along whereas in studying for a final, we merely cram our heads full of an unintelligible conglomeration of facts which disappear completely from our minds the moment the test is finished. You may say that if a student were to study conscientiously throughout the year he would not

have to cram for a final. That all sounds very reasonable but with every one of us carrying six or seven difficult subjects and with each professor treating his students as if they had nothing to do but study for his particular course, the theory does not hold so very well.

At Case, those students who have maintained a "G" average throughout the semester are automatically excused from final examinations in that subject. It seems reasonable to deduce that if this method were adopted at Reserve, it would be an incentive to systematic study because it would tend to eliminate the prolonged mental anguish which accompanies finals.

ALBERT E. KNAUF

Albert E. Knauf, '28, working in the chemical laboratory at the University of Illinois, was the unfortunate victim of an explosion which confined him to the hospital in a serious condition for several weeks. We are happy to announce that he is able to be about again and will continue on the staff of the University for the coming year.

PRESCRIPTION STATISTICS

Some significant prescription statistics have been recently published as a result of the National Drug Store Survey made in St. Louis. This survey seems to indicate that the ratio of official prescriptions is larger than generally believed. While the figures that follow are based on the findings of a relatively small group—thirteen stores—located in a single city, it is possible to check their general accuracy by paralleling them with figures obtained by the George Washington University School of Pharmacy in a survey of a similar kind in Washington, D. C. Here the survey covered ten representative places of business and included 5,000 prescriptions. The St. Louis survey covered 84,000 prescriptions.

These surveys represent widely separated

areas of the country and probably are as representative of the whole United States as any other two cities that could possibly be picked. Apparently, if we accept the "mean" of these figures, we shall not be far from the "approximate truth" in the matter.

Prescriptions calling for official drugs or preparations listed in the U.S.P. and N.F.:

St. Louis	Washington
50%	56%

Prescriptions calling for mixtures of official drugs, or their preparations, with proprietary preparations or trade-marked substances:

St. Louis	Washington
25%	14%

Prescriptions calling for proprietary preparations only:

St. Louis	Washington
25%	30%

The following figures show the approximate percentage of calls for the various classes of pharmaceutical preparations indicated in the surveys. They are interesting because they show the relative importance, from the viewpoint of frequency in use, of the various classes of preparations.

	St. Louis	Washington
Fluids	61%	54%
Capsules	17%	13%
Tablets	10%	14%
Ointments	4%	7%
Papers	3%	4%
Powders	2%	4%
Pills	1%	2%
Effervescent Salts	1%	..
Suppositories	1%
All others, such as lozenges, cachets, ampules, et cetera	1%	1%

PHARMACON PLATFORM

Mr. Gustav C. Kostell was elected Editor for next year on the basis of the following platform:

No more assemblies.

No eight o'clock classes for upper-classmen.

No more douche powder for Lakeside Hospital.

No more theses in pharmacology.

No more elaborate costumes for dancers at future Alumni Smokers.

No more Measles in the School of Pharmacy.

No more Gerlachs in the School (thank gawd).

No more finals.

He favors:

Muzzles for the Cohens.

Elevator running up to the stockroom.

Longer office hours for Dave.

A beer concession in the library.

Elimination of the faculty.

A grand jury investigation of the Student Council activities.

A cup of coffee with fingers.

ADVICE TO STATE BOARD CANDIDATES

Reserve has had a clean record with the Ohio Board for many years, and it is up to you boys to maintain the standards which our graduates have set.

The state board examination is very easy if you'll only use your heads and do not lose your nerve. In the first place, don't cram for the tests. If you do any studying at all, do some reviewing in toxicology as that seems to be our weakest link. Go to Columbus with a group of friends and have a real good time, and incidentally, while you are down there, take the examination. See a few good shows, see the town, do most anything except study. Anything you do not know when you get down there you will never learn by last minute cramming. Regardless of how little you know, don't get rattled. They won't ask you anything you haven't been taught at Reserve and a little common sense will carry you a long ways. Have confidence in yourself and take it with a smile. The type of questions which you will be asked are practical simple applications of the theories and instructions which you have been absorbing or assimilating during the last four years and do not forget that two times two is four. Good luck.

FRATERNITIES

THE RHO CHI SOCIETY

Sigma Chapter of The Rho Chi Society held its annual formal initiation at the Cleveland Club, Wednesday evening, May 25. Marval D. Evans, Edwin W. Miller, Edward W. Hemmeter, Abe Hirsch, Irwin Borover, Lawrence C. Scaletta, and Ladimer Yunger, were initiated into the ranks of Rho Chi, a fitting reward for their efforts in the pursuit of the pharmaceutical sciences. A very pleasant time was had by everyone present and all members are looking forward to future meetings of this type.

PHI DELTA CHI NEWS

Springtime is housecleaning time and Alpha Alpha has been renovated from top to bottom. We want the alumni to come out and see their chapter house. They won't know the old camping ground.

At present the active men are thinking about the summer vacation which is just around the corner. When the sun begins to shine the thoughts of some of our men turn to other things besides books, if you know what we mean. In case you don't know ask Gerber. He seems to be affected that way.

Ping Pong is still the big issue around the chapter house. In the last issue of the Pharmacon Gerber claimed the championship, but the tide has turned and Miller has taken it away from him. Bonheimer has been putting up a stiff fight, but in vain. Bruehler seems to be too busy to partake in the game but tries his hand occasionally.

Si Stafford, of XI chapter, is still with us and is having a lot of trouble with warts. We told him to leave the toads in the back yard alone. Gerber was playing catch recently and caught an egg by mistake. A real egg shampoo was illustrated.

A majority of the alumni have been meeting at the chapter house every two weeks. We want all of our alumni to try to get

out to these meetings as a good time is being had by all. Our out of town men should plan to stay for a couple of days if possible.

Quite a few of our boys attended the Pharmacy School Smoker which was held recently, and a good time was claimed by all.

Unemployment seems to be out of the question around the house this spring. All the boys at present are working while going to school and have jobs lined up for the summer months.

Since vacation is only a few weeks away Alpha Alpha wishes to take this opportunity to wish the students and faculty of pharmacy school a most delightful period of rest.

Alumni News

Our alumni organization has elected its officers and is functioning at high speed. Its officers are as follows: Bro. Wargell, President; Bro. Germ, Vice President; Bro. Koch, Secretary; Bro. Kessler, Treasurer, and Bro. Ischie, contact man. Come out, all ye alumni, and take your seats at the round table.

ALPHA ZETA OMEGA NEWS

Election of officers for the coming year took place Tuesday, May 2. The following fraters were elevated to office: Frater Philip Dunner, exchequer last year, now fills the directorum's chair; Frater David Goldberg, a new member, signare, and Frater David Baskind, new exchequer; Frater William Kutler, vice-directorum; and Frater Joe Eisenberg, Bellarum. Reappointment of Frater Milton Resnick as Custodian was also part of the election.

The formal affair given by the Alumni of the Alpha Zeta Omega Fraternity at Guild Hall, May 16, was a great success. Attendance was almost 100% and the active members in the student body enjoyed them-

selves immensely. The ten-piece band, right from Harlem, kept the right spirit up and both male and female guests had a merry time.

With the graduation in June of several of our fraters, it is now left to Fraters Dave Baskind, David Goldberg, Philip Dunner, and William Kutler to carry on as active members. We, who are now graduating, wish them the best of luck and look back with joy on our years in School.

Alumni News

Fraters Jack Baskind and Max Weinberg celebrated their sixth anniversary as partners in the store at 130th and Kinsman.

Framer Saul Israel of Pittsburgh has now completed one year at the Cleveland School of Chiropraxy.

KAPPA PSI NEWS

The Annual Spring Formal proved to be the best affair in Beta-Beta's history. A large number of alumni were present, including Brothers Drewson, Carner, Scribner, Coble, Bauer, Young, Fitch, Celke, Wolfert, and Kaufhold. Dr. and Mrs. Lankelma were the chaperones. We wish to take this opportunity to thank the alumni for their support.

Graduation takes Brother Webb and Brother Meresicky from our active ranks this June. Both of these men have done much for Kappa Psi during their stay at school. It will be difficult to find two men who can take their places in the chapter roll. Judging from the fraternal interest they have taken in the past, we rest assured that they will give us one hundred per cent support as alumni. Brother Webb expects to stay in Cleveland this summer, and will stay at the chapter house. Brother Meresicky will be married to Miss Helen Sotak in early November—Congratulations.

There will be several summer meetings this year. Cards will be sent to the alumni, telling the time, place and nature of the meetings. A smoker or two, probably a dance and several business meetings will constitute our summer program. We are endeavoring to have a summer initiation this year and have a few pledges who are

very anxious to enter the realms of the Kappa Psi. If we do not hold an initiation this summer these men will be taken into the active chapter at the beginning of the fall term.

The chapter house will be kept open during the summer months for the use of the brothers.

The chapter wishes to congratulate Brother Hester who is receiving his Master of Science degree this June.

We are glad to hear that Brother Hudson of the University Hospitals is rapidly recovering from his recent operation.

Brother and Mrs. Schweickardt are now living on E. Lake Shore Boulevard, where they plan to spend the remainder of the summer enjoying the sunny shores of old Lake Erie.

Brother Lager plans to continue his work at the pharmacy of the University Hospitals during the summer.

Brother Stemple will spend the summer at Waynesburg, Ohio.

Brother Kordich has a position with the Elaborated Roofing Company for the summer.

Brothers Schweickardt and Hoefer are taking courses at Western Reserve summer session.

Brother Sabo will continue his horticultural work throughout the summer.

Brothers Obester, Megyery, Hoefer, and Morse, as yet have not announced their plans for the coming months.

LAWRENCE BALDINGER

The home of Lawrence Baldinger, B. S., Class of '29, has been brightened by the birth of a daughter, Margaret Ann, on April 10. He has one son, Larry, Jr. Their dad received his Master's degree in '31 from Notre Dame, and, at present, is working for his doctorate in Organic Chemistry. With J. A. Nieuwland, Mr. Baldinger recently published "A Reaction of Phenyl-acetonitrile," Jour. Am. Chem. Soc., 54, 828 (1932).

EXPRESSED OIL

There's no telling how long Methuselah might have lived if he had had his appendix, teeth and tonsils out, used the right brand of tooth paste and smoked coughless cigarettes.

—*Hardware Age.*

R

Helen: "Is anyone looking?"

Vera: "No."

Helen: "Good, then we don't have to smoke."

R

Lawyer—"What did you say when you saw the automobile approach the railroad track?"

Watchman—"I said, 'That is a fine car, wasn't it?'"

—*Minnesota Highway News.*

R

The minute you ask some fellows a trifling question they lean back and talk for half an hour.

R

Book Agent (to Janicki, Sr.): "You ought to buy your son an encyclopedia now that he's going to school."

Janicki, Sr.: "Not on your life. Let him walk the same as I did."

R

A Friend in Need

A negro child came into the drug store with a prescription. He paid the required seventy-five cents and disappeared. In about an hour he came back and said:

"Mr. Mack, he says he don't want that medicine, he done died."

R

To Win Success

Be brief—politely.

Be aggressive—tactfully.

Be emphatic—pleasantly.

Be positive—diplomatically.

Be right—graciously.

—*The Flame.*

R

Any man could get rich if he could guess the exact moment at which a piece of junk becomes an antique.

—*Youngstown Vindicator.*

R

Doris: "Does your car have a worm drive?"

Gen: "Yes, but I tell him where to drive."

R

Dean: "Now, Zak, old boy, what did Caesar exclaim when Brutus stabbed him?"

Zak: "Ouch."

R

A Depression is a period when people do without things their parents never had.

R

"Yes," said Beta Cohen, "I'm a thought reader. I can tell you exactly what a person is thinking." "In that case," said Elmer Thomas, "I beg your pardon."

R

Don't question your wife's judgment—look whom she married. (Page Mr. DeOreo)

Let other Navies tag their ships with such awe-inspiring cognomens as Dauntless, Scorpion, and Terror. The United States Navy simply christens its newest cruiser Chicago, and lets it go at that.

—*Chicago Daily News.*

R

A farmer was passing the insane asylum with a load of fertilizer. An inmate called through the fence, "What are you hauling?"

"Fertilizer," replied the farmer.

"What are you going to do with it?"

"Put it on my strawberries."

"And we put cream on ours and they say we're crazy," the inmate countered.

R

During a discourse in a colored church in Harlem recently the minister discoursed on drink. "Drink," said the colored preacher, "is the greatest curse of our country. It makes you quarrel with your neighbors, it makes you shoot at your landlord, and it makes you miss him."

R

"I beg your pardon, but what is your name?" the hotel clerk asked.

"Name?" echoed the indignant guest, who had just signed the register. "Don't you see my name there on the sheet?"

"I do," answered the clerk. "That is what aroused my curiosity."

R

Understood Perfectly

Old negro at information window: "What time do you train git tah Kansas City?"

Agent: "Four-five A. M."

Old Negro: "Yessah, thankee, but how long fo-five?"

R

Dot: "Don't you love an evening like this?"

Norm: "You bet, but I generally wait until we get a little farther out in the country."

R

"Boy, we sure did shake that thing," said the flea to the elephant after they had crossed a bridge.

R

Russian Queen: "What are you trying to pull off?"

Skolnik: "You ought to know—you dress yourself, don't you?"

R

What, No Bell?

Mrs. Harris: "Imagine the bell has rung and come into the Assembly."

Avellone: "Imagine we're coming into the Assembly."

R

"Organization"

Organization is the art of getting men to respond like thoroughbreds. When you call upon a thoroughbred, he gives you all the speed, strength of heart and sinew in him. When you call upon a JACKASS, he KICKS.

—*Mentology.*

"Tell me," Mrs. Harris said, "how you and your husband get along together."

"Very nicely indeed," replied Mrs. Schweickardt. "Here we've been married going on seven months, and I haven't had to call in the police but twice."

R

Gus: "The leading lady seems to have a break in her enunciation this evening."

Art: "Say, you keep your eyes on your music."

R

Miller: "I'm the happiest man alive, I've got the finest wife in the country."

Bruehler: "Yes, that does make a man happy, having his wife in the country."

R

A young man and his sweetheart were taking a walk through the woods one day and the young man asked the girl to be his wife. She told him she would give him his answer when they were out of the woods, and later when he asked her why she said: "My father proposed to my mother in these woods and on the way home he was killed by an automobile."

R

Tit for Tat

One Sunday morning a member of a church that could boast of a new organ met a friend who belonged to a church that had just purchased one.

"I hear you've got a new organ," he said. "Now all you need is a monkey."

"And all you need is an organ," his friend answered with a smile.

R

One day, as I chanced to pass
A beaver was damming a river
And a man who had run out of gas
Was doing the same to his flivver.

R

An Irishman applied for a job at a power plant. "What can you do?" asked the chief.

"Almost anything, sir," said the Irishman.

"Well," said the chief, a bit of a joker, "you seem to be all right, could you wheel out a barrow of smoke?"

"Sure, fill it up for me."

Little Mary, aged five, driving through the country with her father, for the first time saw cat-tails growing along the road.

"Oh, daddy," she cried, "look at the hot dog garden!"

—The Kablegram.

R

They sliced their drives into the rough, and went in search of the balls. They searched for a long time without success, a kind old lady watching them with sympathetic interest. Finally after the search had lasted half an hour, the dear old lady spoke to them.

"I don't want to bother you gentlemen," she said quietly, "but would it be cheating if I told you where they are?"

R

George: "I drove a thousand miles last week."

Frank: "Did you take a trip?"

George: "No. Hunting a place to park."

R

Hoefer (to waiter): "Wie Gehts?"

Waiter: "One order of wheat cakes."

Hoefer: "Nein, nein."

Waiter: "Nine? You sure are hungry."

R

Susie: "Do you ever play anything by request?"

Delighted Musician: "Certainly, ma'am."

Susie: "Then I wonder if you'd play dominos until I've finished my lunch."

R

There was a sign in the bathroom of a boarding house which read: "Please wash tub after bathing landlady."

R

Thomas: "The only difference between you and a horse is that a horse wears a collar."

Chichota: "Well, I wear a collar."

Thomas: "Then there isn't any difference at all."

R

Kostell: "Those are my wife's ashes in the jar on the mantle."

Hirsch: "Oh, then she has passed into the great beyond?"

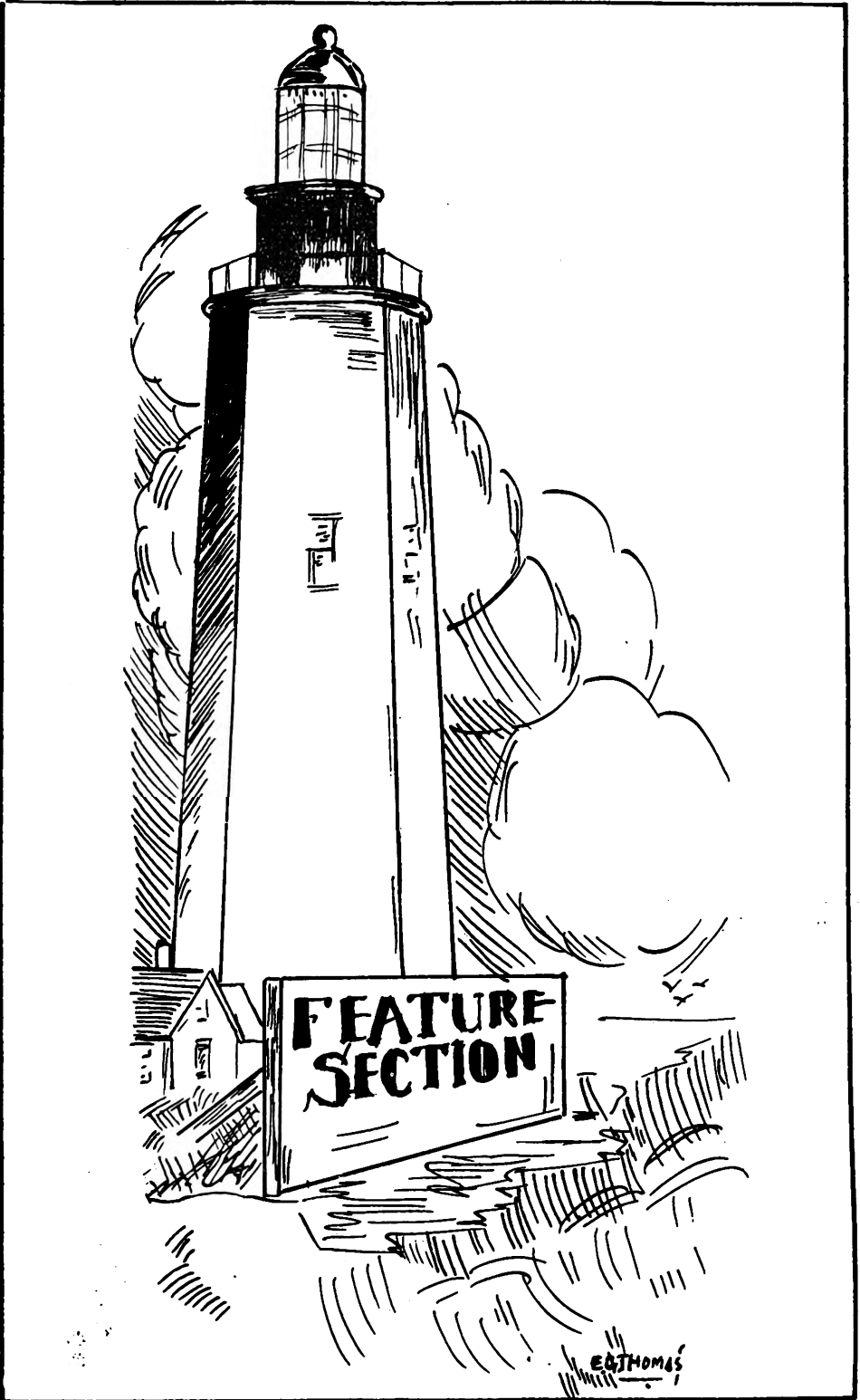
Kostell: "Great beyond, nothing! She's just too lazy to look for an ash tray."

To The Alumni:

If you know the name of any Prospective Student kindly list name and address below and mail to the *Pharmacon*, W. R. U.

Name.....

Address.....

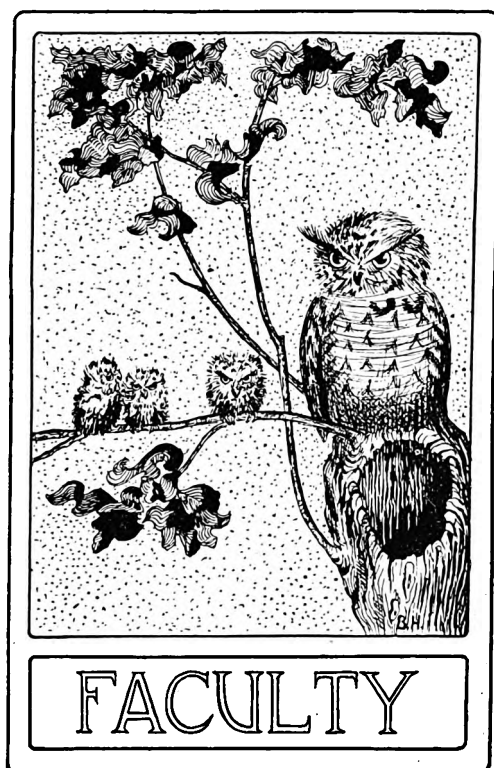




DEDICATED TO
THE SURE VISION, THE HIGH AIMS AND
THE STEADY COURAGE OF OUR DEAN

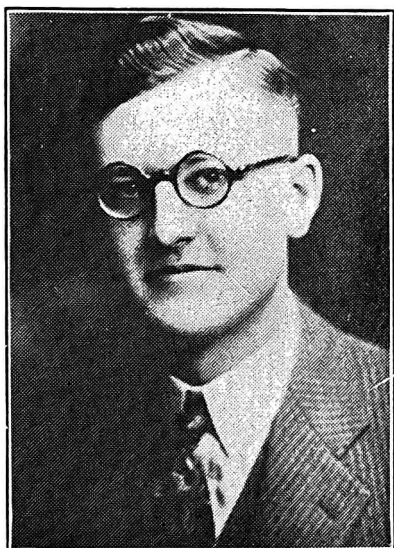
EDWARD SPEASE

AND TO
THE RICH PROMISE OF A GREATER
PHARMACY SCHOOL WHICH THROUGH
HIM STANDS REVEALED.



THE DIARMACON RESERVE





HERMAN P. LANKELMA, Ph. D.

Assistant Professor of Chemistry

Any student who is industrious and makes a sincere effort is always sure of a square deal from Dr. Lankelma. He realizes that his subject, organic chemistry, is hard to master, but through his efforts most students succeed in accomplishing what they consider an impossibility in the beginning. Dr. Lankelma is by far the finest lecturer in the whole university.

FRANKLYN J. BACON, Ph. D.

Professor of Pharmacognosy

Men who know their subject well are few, but men who know their subject and know how to present that subject in an interesting way, are fewer. We respect and admire Dr. Bacon because he is an authority on many phases of botany and pharmacology, because he is always smartly dressed, and because, underneath his hard-boiled exterior, he is a sincere friend and adviser to his students.





EDWARD D. DAVY, B. S.

Professor of Analytical Pharmacy

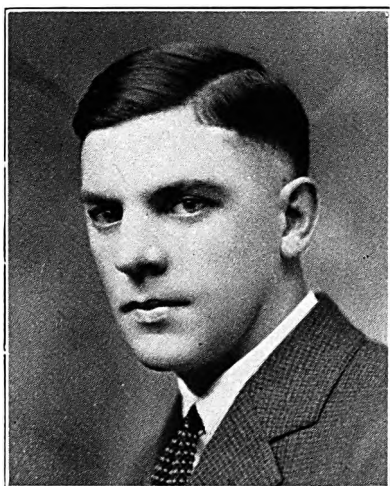
The saying, "Still waters run deep," can aptly be applied to Professor Davy. Many students would be surprised to learn that he has done much in the line of research merely to prove to his own satisfaction the constituents of some drug. Saying little but accomplishing a great deal is his hobby. His students admire him for his fairness and respect him for mastery and inexhaustible knowledge of analytical chemistry and pharmacy.

NEIL T. CHAMBERLIN, B. S., A. B.

Assistant Professor of Pharmacy

"What do we live for, if it is not to make life less difficult for others?" must be the belief of Professor Chamberlin. He has never been found too busy to give individual help, or take charge of some student activity. His true worth will never be fully appreciated until he is no longer a member of our faculty.





LEROY D. EDWARDS, M.S.

Instructor in Pharmacognosy

Professor Edwards has the harrowing task of teaching our students the fundamentals of Pharmacognosy. Through his well-planned lectures and his clear explanations and descriptions he is able to do a fine job of it. We need more men like him.

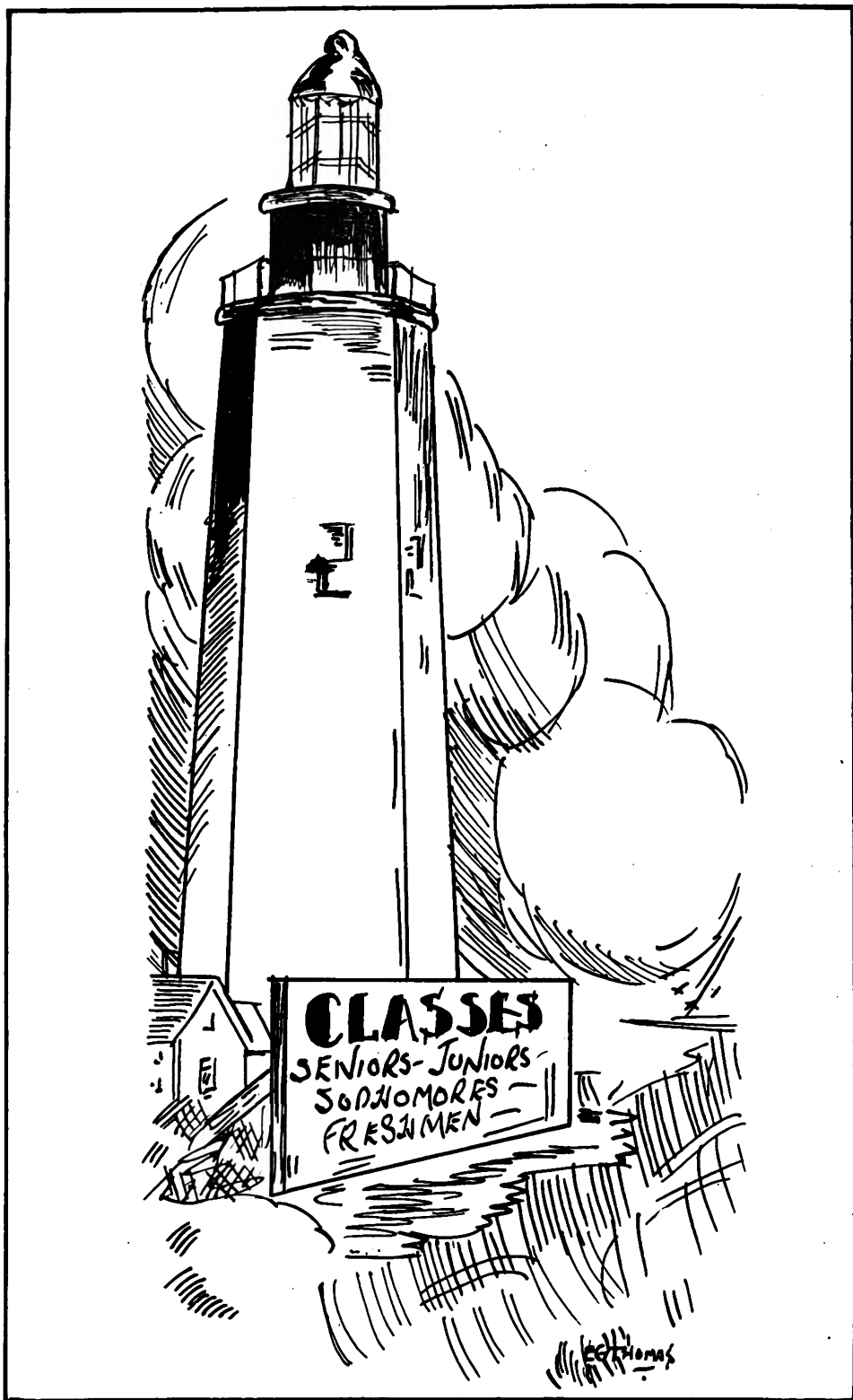
ADELAIDE EVANS HARRIS, M. A.

(Mrs. R. J.)

Instructor in English

To Mrs. Harris falls the task of convincing us that English should be included in the pharmacy school curriculum. Although many students will never realize the value of her teachings during their school days, the future will prove to them that her statement, "A good use of English is essential to the success of any business man," is true.







Winton Adelbert Webb, B. S.

Kappa Psi
Class President (4), Student Council (3, 4),
Honor Key, (4), A. Ph. A. (3), President (4)



Francis Bihn, Ph. C.



George Henry Gerlach, Ph. C., B. S.

Rho Chi
Senior Scholarship, Honor Key (3), Student
Council President (4), Student Council Vice
President (3), Pharmacon (1, 2, 3), Editor (4),
Nihon Staff (3), A. Ph. A. (3, 4), Student As-
sistant in Botany (3), Bowling (2)



Irwin Borover, Ph. C.
Rho Chi



Arthur Abe Skolnik, B. S.

Rho Pi Phi
Phi Rho Alpha
Ohio State U. (1, 2, 3)



Aaron Milton Cohen, Ph. C.

Alpha Zeta Omega
Class Treasurer (2), Bowling (3), Basket
Ball (2)



Gustav Charles Kostell, A. B., Ph. C.

Rho Chi
Class President (3), Student Council (3),
Honor Key (3)

Abe Hirsch, Ph. C.

Rho Chi

Honor Key (3), Athletic Manager (3), Student Council (3), Baseball (1, 2, 3), Basket Ball (1, 2, 3), Nihon (3)



Victor DeOreo, Ph. C.

Class Treasurer (2)



Samuel H. Hruska, Ph. C.

Freshman Basket Ball (1), Basket Ball (2, 3), Baseball (1, 2, 3)



Saul Lawrence Eisenberg, Ph. C.

Alpha Zeta Omega

Class President (2), Band (1), Student Council (2), Red Cat (2, 3)



Frank Joseph Mader, Ph. C.



Michael Giovanni Girbino

Pharmacoon (4), Basket Ball (2), Baseball (1, 2, 3)



Edwin Wendell Miller, Ph. C.

Phi Delta Chi, Rho Chi

Honor Key (3), Student Council (3)





John Aloysius Obester, Ph. C.

Kappa Psi

Baseball (1, 2, 3), Basket Ball (1, 2, 3), Volley-
ball (2)



Lawrence Clement Scaletta, Ph. C.
Rho Chi



Weldon Reed Rehburg, Ph. C.

Band (1)

John Charles Meresicky, B. S., Ph. C.

Kappa Psi
Bowling (2)

Julius Yale Duber, Ph. C.

Alpha Zeta Omega
Class Vice President (2)

Samuel Lester, Ph. C.

Alpha Zeta Omega

Stephen Wilkins Oscar, Ph. C.

Barney Weinstein, Ph. C.



SENIORS

GEORGE H. GERLACH

WINTON A. WEBB

ARTHUR A. SKOLNIK

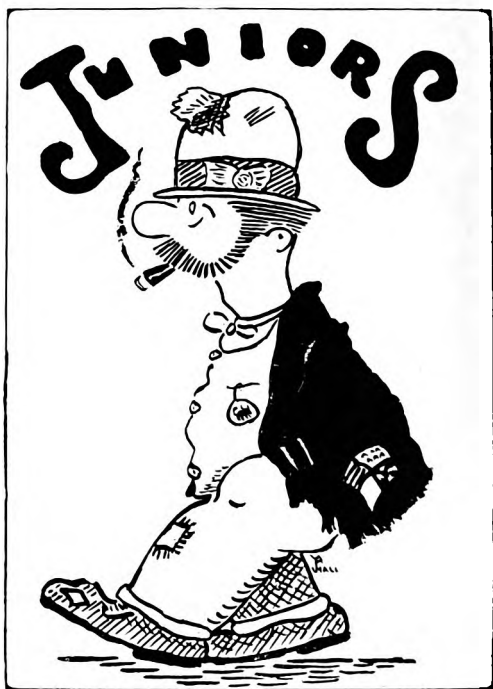
Four years is not a long time in the life of an old established university such as Reserve, nor, for that matter, in the life of the individual students who have gone to Reserve. Four years of college have passed and now that we look back upon them, it seems that they have passed in a few days.

In the fall of 1928, some fifty students enrolled in the freshman class at Pharmacy School. During the first three years there were numerous accretions from other schools and more numerous departures from this. Today there are but two of the original fifty left, a third from Ohio State having joined us last fall. We have learned a great many things which are printed in the Pharmacopoeia, and perhaps as many which most decidedly are not. Perhaps we have gained worldly wisdom during our college course. At any rate, we have not confined ourselves entirely to our books.

It is all over now. In anticipation, a college career seems stupendous. In retrospect it seems merely a succession of rapid events which passed smoothly with just enough trouble and just enough worry to make it interesting.

Two of our number are entering Medical School this fall. The third intends to take up graduate work in some branch of Pharmacy. Regardless of what we do in the future, we shall always be proud of the fact that we are professional pharmacists and solemnly vow not to confine our efforts and ambitions to purveying hair nets and hot water bottles to an insatiable public.

CHARLES R. BENNETT
 FRANCIS BIHN
 IRWIN BOROVER
 GEORGE H. BRUEHLER, JR.
 AARON M. COHEN
 SEYMOUR R. COHEN
 WILBUR J. DARR
 VICTOR DEOREO
 JULIUS Y. DUBER
 SAUL L. EISENBERG
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 SAMUEL H. HRUSKA
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 EDWIN W. MILLER
 JOHN A. OBESTER
 JEROME S. RATNER
 WELDON R. REHBURG
 HELEN C. RELL
 ALBERT L. WELLS
 LADIMER YOUNGER



JUNIOR CLASS

The casualties in this Class have been very heavy and now only a handful remain. Some of these Juniors will graduate this June with a degree of Pharmaceutical Chemist and expect to leave school. Others are planning to return for a fourth year to earn a Bachelor's degree, while others are planning even beyond that for medicine or graduate work. Although we have lost many since we started as Freshmen, those who have remained have certainly upheld the honor of the Class.

We feel sure that in the future our members will reflect credit on the Class by their work, either in Pharmacy or allied sciences.

ALLEN M. ARMSTRONG
 JOHN BELLAN
 PHILIP H. DUNNER
 KENNETH FOY
 ARTHUR A. GISMONDI
 DAVID M. GOLDBERG

MEYER H. GOLDBERG
 THEODORE E. GUTKOWSKI
 LEONARD I. HAGEN
 OTTO W. HANEBERG
 IVAN J. S. KORDICH
 WILLIAM K. KUTLER



HAROLD A. KRAVITZ
 IRVING LANDAU
 SAMUEL L. LEINER
 HAROLD C. LEOPOLD
 CLARENCE H. PIERSTORF
 JEROME S. RATNER

LEO P. RUSSO
 STEPHEN W. SABO
 WILBERT J. SEITER
 EMORY G. SOBONYA
 RAY R. STEMPLE
 DAVID ZAK

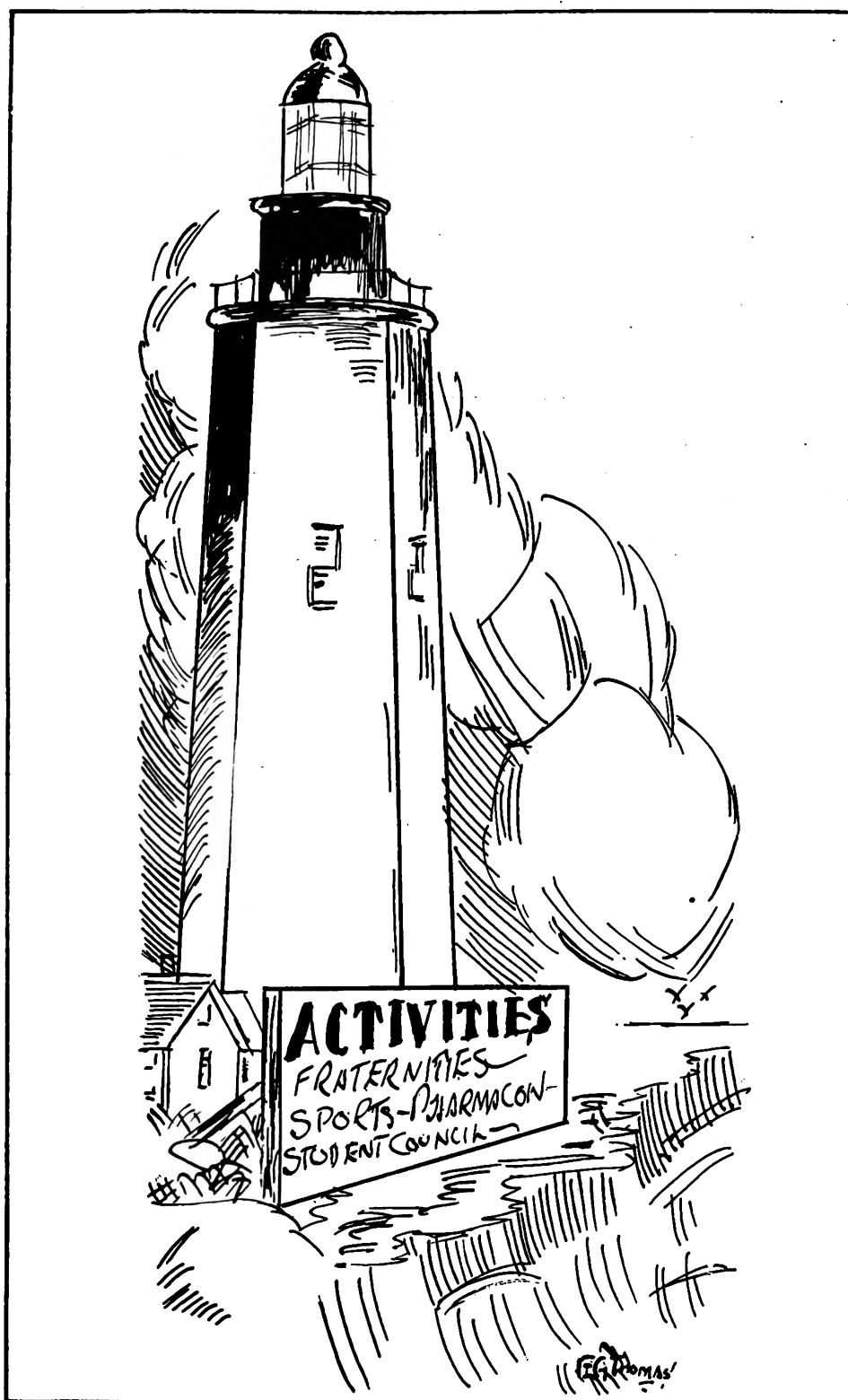


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 SAMUEL L. BAKER
 JEROME BOLLOTIN
 ROBERT C. BONHEIMER
 SAMUEL J. CANTOR
 MYRON CHICHOTA
 ISADORE L. FENSTER
 MAURICE L. FINBERG
 NORMAN C. FRETTHOLD
 KENNETH C. GERBER
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 GEORGE E. HLAVIN
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 CHARLES E. JOHNSON
 GEORGE W. JOHNSTON, JR.

MEYER F. KANTER
 DAVID KATOWITZ
 ALBERT KLINE
 WALTER A. KNUREK
 FRANK C. KOCHTAN
 LEO C. KREJCI
 PHILLIP F. LEMBERG
 ROGER W. MARQUAND
 JOHN W. MORSE
 GEORGE R. MOTOASCA
 SUSIE L. PORTER
 ALEX SAFERIN
 VERA A. SONICH
 FOSTER R. STEVENSON
 HAROLD WOLKOV

STANLEY V. ZIOLEK



RHO CHI SOCIETY

Sigma Chapter

Nineteen Thirty-two

Irwin Borover

George H. Gerlach

Edward W. Hemmeter

Gustav C. Kostell

Abe Hirsch

Edwin W. Miller

Lawrence C. Scaletta

Nineteen Thirty-three

Ladimer Yunger



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WINTON A. WEBB—*Treasurer*

Class of 1933

GUSTAV C. KOSTELL—*Vice-President*

EDWIN W. MILLER

ABE HIRSCH

Class of 1934

THEODORE E. GUTKOWSKI

PHILIP H. DUNNER

Class of 1935

NORMAN C. FRETTHOLD





PHI DELTA CHI
Alpha Alpha Chapter

Established at

Reserve, 1923



Founded at

Michigan, 1863

Fratres in Facultate

Edward Spease

Edward Davy

Russel Stimson

Marval Evans

Fratres in Collegio

Nineteen Thirty-two

Edwin Miller

Nineteen Thirty-three

George Bruehler

Otto Haneberg

Nineteen Thirty-four

Kenneth Gerber

Nineteen Thirty-five

Emory Sobonya

Robert Bonheimer



KAPPA PSI

Beta Beta Chapter

Founded at Medical College of Virginia, 1879

Established at Reserve, 1910

Fratres in Facultate

Neil T. Chamberlin
Robert M. Porter
Earl Hester
Franklin J. Bacon

Herman P. Lankelma
Paul R. Hudson
LeRoy Edwards
Harry F. Valway

Frater in Universitate

Donald L. Kaufhold

Fratres in Collegio

Nineteen Thirty-two

Winton A. Webb

John A. Obester

Jack C. Meresicky

Nineteen Thirty-three

Edward Hoefer
Emery Megyery

Roger K. Lager
Karl Wm. Schweickardt

Nineteen Thirty-four

Steve Sabo
John Morse

Ivan Kordich
John Bellan

Raymond Stemple

Nineteen Thirty-five

Myron Chicota
George Knurik
Peter Hinz

George Motoasca
Ted Gutkowski
Roger Marquand

ALPHA ZETA OMEGA

Theta Chapter

Founded at Philadelphia College of Pharmacy in 1910

10 Active Chapters

Established at Reserve in 1926

Fratres in Collegio

Nineteen Thirty-two

Saul Eisenberg
Aaron Cohen

Samuel Lester
Seymour Cohen

Julius Duber

Nineteen Thirty-three

Philip Dunner

Leonard Hagen

William Kutler





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BASKETBALL TEAM

PHARMACY ATHLETICS

Since physical education is not compulsory at Pharmacy School, it has been the aim of part of the student body to replace this deficit with inter-pharmacy and inter-mural athletics. Pharmacy School usually enters a fast, well balanced team in almost every major sport at the university. Every year some of the more ambitious and energetic pill-rollers make the squads on the university teams.

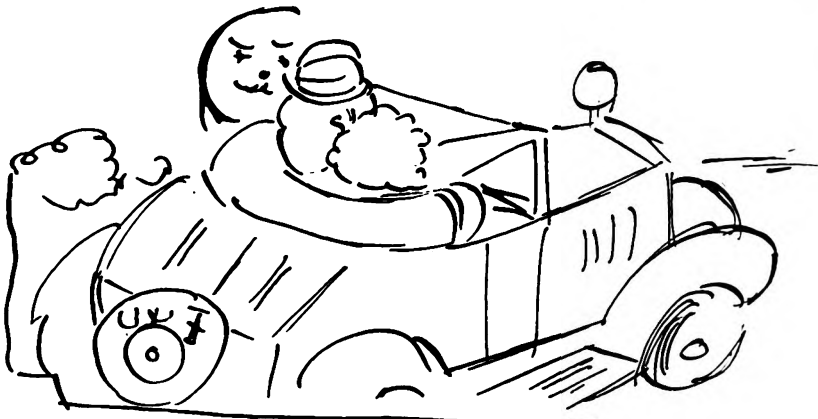
This year, due to a seeming lack of cooperative interest in athletics, most of the major sports were neglected. A review of the year's pharmacy sport calendar shows us that:

In Basket Ball—A fast and scrappy pharmacy team, made up of a group of our boys, entered the intramural contests and fought its way to runner-up position in the league.

In Bowling—A steady, hard plugging pharmacy team entered intramural competition, but found the opposition a little too steep. Better luck next year.

In Baseball—The annual Freshman-Junior baseball tilt provided fun for the participants and thrills for the spectators. The game was a very close battle, but the outcome was inevitable. Nothing could stop the great Junior team—not even the worthy Frosh. Of course you all know the Juniors won with ease. Score? Oh, 10—9.

MOST ANSWERING



ANATOMY-STUDYING IT (ADDER)
 PHY'S 16182
 (THIS DEPICTS A SENIOR IN THE GRADUATE CLASS)



THE DROPS FOR



BEFORE



AFTER

FROSH'S IDEA OF
 BEING DIGNIFIED

AN NERTZ
 10.11.13

FOR THOMAS



Vol. 6

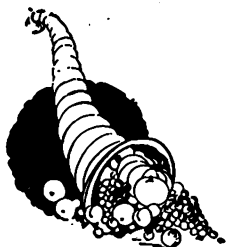
OCTOBER, 1932

No. 4

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THE RESERVE PHARMACON

A Publication Devoted to Professional Pharmacy

Pharmacy In Fiction

By

Geo. R. Motoasca '35

"The Lord hath created medicines out of the earth; and he that is wise will have no disgust at them . . . With these doth the apothecary make a confection; and his works shall not be brought to an end; and from him is peace upon the face of the earth." Thus it is written in Ecclesiasticus 38: 4, 8. The passage is probably the earliest non-technical reference definitely mentioning the apothecary. It is not a record of the birth of pharmacy, for the alleviation of pain through the application of herbs and minerals was undoubtedly practiced in Egypt and Babylonia as early as 3000 B. C. It does herald, however, the entrance of the profession into literature.

After the Bible, with its allusions to the making of holy ointment and perfume "after the art of the apothecary" (Exodus 30: 25, 35), there is a long lapse in the records. Until the sixteenth century the apothecary figured usually, as in Chaucer's *Pardoner's Tale*, as a dispenser of poisons. His connection with toxicology during that time was prominent, no doubt because his part in murders and suicides provided more spectacular themes than did his normal existence.

The plays of Shakespeare abound in pharmaceutical terms. His characters speak repeatedly of pills, oils, balsams, syrups, infusions, plasters, poultices, cataplasms, salves, potions and concoctions. More specifically they refer to such substances as aconitum, aqua vitae, civet, colonquintida, henbane, mandragora, musk, pharmaceti, poppy, catsbane, rhubarb, senna, and wine. In Act V, Scene I, of *Romeo and Juliet* the playwright portrays the apothecary:

"And in his needy shop a tortoise hung,
An alligator stuff'd and other skins
Of ill-shaped fishes; and about his shelves
A beggarly account of empty boxes,

Green earthen pots, bladders and musty seeds,
Remnants of pock thread and old cakes of roses,
Were thinly scatter'd, to make up a show."

Through John Keats comes the connection of pharmacy with poetry. Keats, at the age of fifteen, became apprenticed to a physician, a Mr. Hammond, at Edmonton. An illuminating item showing the state of pharmaceutical training in the eighteenth and early nineteenth centuries appears in his contract with Hammond. While receiving instruction under the physician, Keats was not to "haunt taverns or playhouses, not to play at dice or cards, nor absent himself from his master's service day or night, unlawfully, but in all things as a faithful apprentice he should behave himself toward his said master and all during the said time." Keats was not intended for pharmacy. He quarreled with Hammond, and they separated by mutual consent. Though he finished his studies in London and even passed the official pharmaceutical examination given by Apothecaries' Hall, he never practiced his profession and soon gave it up completely for poetry. That pharmacy still lingered in his mind is apparent in parts of his poems.

"Wireless," a short story by Rudyard Kipling, portrays the apothecary-poet as reincarnated in John Shaynor, a sickly, moody druggist living in the early 1900s. A visiting doctor mixes Shaynor a stupefying drink from drugs he finds on the shelves. In semi-consciousness the pharmacist jots down and recites the poetry of Keats which he has never read. He mutters passages from the "The Eve of St. Agnes" which hint at something more than poetic intuition:

"candied quince, and plum and gourd;
With jellies s(m)oother than the creamy curd,

And lucent syrops, tinct with cinnamon;
Manna and dates, in argosy transferr'd
From Fez; and spiced dainties, every one,
From silken Samarcand to cedar'd Lebanon."

The drug store in which the action of "Wireless" takes place is not in the least "fictional." The reader is made to feel "a confused smell of orris, Kodak films, Vulcanite, tooth-powder, sachet, and almond cream in the air." The most impressive part of the pharmacy is the window. Here blaze "three superb jars—red, green, and blue"—whose colors daub "the faceted knobs of the drug drawers, the cut glass scent flacons, and the bulbs of sparklet bottles." "They flushed the floor in gorgeous patches; splashed along the nickel-silver counter rails."

Practically the same effect is produced by these emblematic jars in Flaubert's *Madame Bovary* and L. E. H. Richard's *In Blessed Cyrus* (here the jars are "liquid amethyst, ruby, and topaz"). The shop window in *Tono-Bungay* by H. G. Wells, however, contains a frictional electrical machine, an air pump, and two or three tripods instead of "the customary blue, yellow, and red bottles." "There was also a plaster of Paris horse to indicate veterinary medicines" and "below were scent packets and diffusers and sponges and soda-water syphons and such-like things."

The interiors of the different shops shown in fiction show much variety. The stuffed alligator, with the tortoise and skins of fishes, displayed by the Elizabethan chemist in "Romeo and Juliet," is found again in the eighteenth century shop described by Washington Irving of a certain Mr. Skryme, who had "two or three stuffed alligators hanging up in his shop and several snakes in bottles." Though the rows of bottles and the glass knobbed drawers seem common to all of them, each shop is distinctive. Ponderevo's in *Tono-Bungay* gives one an idea of "piled dummy boxes of soap and scent." The early eighteenth century shop in Willa Cather's *Shadows on the Rock* has in full view a distilling apparatus, mortars, balances, retorts, carboys, and a stuffed alligator. Some years later a cabinet is added containing brilliant sea-shells, star-fish, horseshoe crabs, dried sea-weed and branches of coral.

Walter Besant's novel, *The World Went Very Well Then*, paints a good image of a middle eighteenth century shop. One reads that it "was small like the parlor behind it. The rafters were hung with dried herbs; the

shelves were full of bottles. There was a chair for the reception of patients who could not stand; there was a counter, with scales great and small; a pestle and mortar; a box containing surgical instruments—the pincers for pulling out teeth, the cup, the basin, the blister, and other horrid tools of the surgeon's craft." "The door was always open, because the window gave little light, partly because there was a shelf with bottles before it, and partly because the glass was full of bull's-eyes, which gave strength no doubt yet kept the room obscure."

The pharmacy of Mr. Tooth (*In Blessed Cyrus*) is of the modern, luxurious type. "Panels of jasper lined the walls, set in white enamel mouldings. A solid slab of marble formed the counter; soda fountain, tobacco jars, pestle and mortar, all shone in the same translucent tints." "The whole shop glittered like a fairy palace. From the tiled floor to the fretted ceiling everything glowed and gleamed with color and polish."

In the more modern pharmacy the back room is just as important as the shop itself. The action in Lewis Beach's three act comedy, *Merry Andrew*, is limited entirely to this part of the drug store. The curtain rises on a combined office and prescription room. Along one wall there are shelves holding ledgers and prescription books. There is a cupboard containing medicines in boxes. The rear wall is occupied by a working shelf on which can be seen an Apothecary scale, mortar, pestle, a funnel, and "all the tools necessary for mixing prescriptions." Above the working table are more shelves, to the ceiling, filled with labelled bottles and cans of all sizes; under it are drawers and cupboards. A second working shelf is covered with odds and ends, including a candy scales. Toward the center of the room is a desk and several chairs. Aiken is filling a prescription. "He is weighing some powder. He puts it in a mortar, adds a weight to the scale balance, checks off an item on the prescription." With the palette knife he puts powder on each of six papers which he folds up and places into a small box.

Homais, in *Madame Bovary*, also has a special room. "He often spent long hours there, labelling, decanting, and doing up again; and he looked upon it not as a simple store but a veritable sanctuary; whence there afterwards issued all sorts of pills, boluses, infusions, lotions, and potions that would bear far and wide his celebrity." The young hero of *Tono-Bungay* tells of conversations with his

uncle in the "dispensing lair behind the barrier": "he pounding up stuff in a mortar perhaps, and I rolling pill-stuff into long rolls and cutting it up with a sort of broad, fluted knife."

It is interesting to note the pharmaceutical and botanical names used in the various sketches. Some of those used by Shakespeare have already been mentioned. The side of Homais' shop is placarded with inscriptions announcing "Vichy, Seltzer, Barege waters, blood purifiers, Raspail patent medicine, Arabian racahout, Darcet lozenges, Regnault paste, trusses, baths, hyganic chocolate." Auclair (*Shadows on the Rock*) receives in a shipment from France "powders, salts, gums, blue crystals, strong smelling spices, bay leaves, lime flowers, calomel flowers, senna, hyssop, mustard, dried plants and roots in great variety," conserved fruits—figs, apricots, cherries, candied lemon rind, and crystallized ginger. Among these he finds also "bitumen—oleum terra," a "dark, ill-smelling paste which looked like wagon grease; a kind of petroleum jelly that seeped out of the rocks in a certain cairn on the Island of Barbados." The apothecary purifies this, adds a small amount of alcohol and borax, and prepares a remedy for snow-blindness.

This enumeration of drugs and pharmaceutical equipment does not cast any light on the position of the pharmacist in the community nor on his character and welfare. *Shadows on the Rock*, a narrative of Quebec in 1697, gives the most pleasing picture. In Euclide Auclair, philosopher-apothecary, one finds the typical old-world pharmacist whose profession has been practiced by father and grandfather before him. Refined and rather frail, he dislikes in the new world the crudeness and hardships so unlike his native Paris. His shop, situated half-way between the upper and lower town, is the most French-like location in the colony. People linger in its quiet, undisturbed atmosphere so reminiscent of "home" to talk of old times.

Auclair is not only a pharmacist; he is also a physician and surgeon. We see him anointing the sprained ankle of the Reverend Mother of the Ursulines and treating the "varicose" legs of Bishop Laval. When his friend and patron, Count Frontenac, dies a most unique service falls to the apothecary. It seems quite natural, however, that he, of all the colonists, should be the one to cut out the Count's heart and send it to France.

Auclair is not afraid of new ideas or good

old-fashioned ones. He firmly denounces the indiscriminate use of cauterization and blood-letting in curing disease. Blood-letting being "in vogue," he finds himself many enemies, especially among the practitioners of the art, the barbers. His professional pride is observed in his keeping people away from quack doctors and "giving them tisanes and poultices, which at least could do them no harm." With perfect sanity he refuses to let superstition, religion, or fashion enter his work. When his daughter tells him how Mother Catherine de Saint-Augustine cured a sick sailor boy with powder from the skull of Father Brebeuf, he chuckles and explains kindly that, though there may be powers in sacred relics, they are not to be applied to the digestive tract. He deplors the fact that apothecaries in England and France still endanger the lives of their superstitious customers by dispensing pulverized skulls and unicorns' horns. The author shows us Auclair's distrust for remedies made from the organs of blood of animals except for some of proven merit as cod liver oil. The apothecary is vehement, for instance, in his condemnation of such "fashionable" remedies as that made from freshly killed, popularly called "viper broth."

For his dutiful service to the colony Auclair is poorly rewarded. "The colonists paid very little for their remedies; if they brought a basket of eggs, or a chicken, or a rabbit, they thought they were treating their medical man very handsomely." His existence depends almost entirely on the patronage of the Count. In C. Brontë's *Jane Eyre* there is another example of insufficient recompense. The apothecary is called upon to act as a physician simply because he can charge only for his prescriptions and not for medical treatment.

Mr. Brinjes, pharmacist in *The World Went Very Well Then*, almost fifty years after Auclair, is more inclined to superstition. Like Mr. Skryme in Irving's *Sketch Book* he is considered as "a kind of conjurer." The medical book on his counter is thought by many to be a book of spells "and to be the means by which Mr. Brinjes was enabled to communicate with a certain Potentate, who helped him and did his bidding." Like Auclair he is not only a pharmacist, but also a surgeon and dentist. "On Sunday morning Mr. Brinjes and his assistant let blood gratis to whoever wished for that wholesome refreshment; and every morning he pulled out teeth at a shilling or half a crown (according to the means of the customer)."

The common people who go first to the herb woman and only come to him when her remedies fail are extremely conscious of his skill. "It was whispered that he knew of charms by which he could constrain a person even in the misery of tooth-ache to fall sound asleep, and continue asleep while Mr. Brinjes would take out a tooth, without causing him to waken or feel any pain whatever." By "certain preparations, the secret of which he alone knew, and had learned in his voyages" he is supposed to have acquired a mastery over all diseases. He removes warts by looking at them. Rheumatism "he cured by making the patient carry a potato in his pocket." On the other hand, "it was also whispered of him that by magic of witchcraft Mr. Brinjes could bring diseases upon those who offended him." The people respect and fear him. They go to him for amulets and charms against such things as drowning and hanging. All in all, Brinjes appears to be a clever man of the world who takes advantage of superstitions and can twirl people around his little finger.

Tono-Bungay and Balzac's *The Rise and Fall of Cesar Birotteau* portray the spectacular, but unprofessional, side of pharmacy. These novels deal with the advancement of the insignificant apothecaries to patent medicine kingship. Both are Napoleonic in character and gesture.

Ponderevo (*Tono-Bungay*), a born adventurer, feels that there is no growth in his business. He deplores the fact that people wait to get sick before buying medicine. A sign in his window advises one to "Buy Ponderevo's Cough Linctus Now. Now! Why? Two-pence Cheaper than in Winter, You Store Apples! Why not the Medicine You are bound to Need?" He learns to sell his customers "faith." *Tono-Bungay*, the drug creation to which he owes his fame, is, as his nephew relates, "a mischievous trash, slightly stimulating, aromatic, likely to become a bad habit and train people in the habitual use of stronger tonics and insidiously dangerous to people with defective kidneys. It would cost about sevenpence, 14c, the large bottle to make, including bottling, and we were to sell it at half a crown, 67c, plus the cost of the patent medicine stamp." The rise of *Tono-Bungay's* popularity is rapid. Pondo's propaganda, though the story takes place in the latter eighteen hundreds, is suggestive of modern advertising. "Are you bored with your business? Are you bored with your dinner? Are you bored with your wife?" he asks, and

hastily confides that *Tono-Bungay* is the remedy. His nephew says, "I made a machine for sticking on labels. I also contrived to have our mixture made concentrated, got the bottles which came sliding down a guarded slant-way, nearly filled with distilled water at one tap, and dripped our magic ingredients in at the other."

The life of Cesar Birotteau is strikingly similar to that of Ponderevo. Birotteau, living in France during the Napoleonic era, brings in a different angle of pharmacy. He is a "perfumer," the discoverer of the Double Paste of Sultans and an oil of nuts which stimulates the growth of the hair. His skin cream "removes all blotches, even those that are obstinately rebellious, whitens the most recalcitrant epidermis, and dissipates the perspirations of the skin,—will disperse the little pimples which appear inopportunely at certain times, and interfere with a lady's projects for a ball; it refreshes and revives the color." His essence of nuts is not harmful to the "seat of intelligence." Balzac's novel relates the brilliant rise and honorable fall of this simple-hearted man who is inclined to feel Napoleonic, though "like a true perfumer, he hated the revolution which made a Titus of every man and abolished power."

Problems of pharmaceutical ethics appear in several instances in the writings. In "Wireless" the reader is made to pity the careless apothecary who makes an error in a prescription and is reported to Apothecaries' Hall by the doctor. The "result was an apology as one might make who had spent a night on the rack." Balzac's novel gives an opposite impression in regard to the French Royal Academy of Sciences. When Birotteau wishes to popularize a patent by getting the approval of that worthy society, he is told that "charlatans have so abused the name of the Academy that it would not help." In *Madame Bovary* a chemist infringes a law which "forbade all persons not having a diploma to practice medicine." Prosecution seems lenient, however, for soon "he continued, as heretofore, to give anodyne consultations in his back parlor."

A final novel worth mentioning is that by Ian Irons called *Simplex*. It depicts a young man who is almost too righteous a pharmacist. Besides, he is a great lover of nature and therefore attempts to herbalize his profession.

The works that have been discussed are not by far a complete study of the treatment of pharmacy in fiction. They are merely representative of a large field into which any in-

terested student may profitably investigate. An attempt has been made to show as many phases of the subject as possible. The feeling which seems to prevail in the material reviewed (except, of course, in the ludicrous, debunking *Tono-Bungay* and *The Rise and Fall of Cesar Birotteau*) not only strengthens the position of the pharmacist as a public servant, but bears out the fact that "on him depends the physician's reputation. He holds it literally in the palm of his hand, Sir." (*Wireless.*)

IPOMOEA

By Geo. H. Gerlach, Class of '32
W.R.U. Medical School, Class of '36

The genus *Ipomoea* (Fam. Convolvulaceae) includes from 300 to 400 species of herbs and shrubs, some being erect, others prostrate, but very many climbing. The ipomoeas are remarkable for their showy flowers, as for example, *Ipomoea purpurea*, the common morning glory. Many of the species produce large tuberous roots which contain a drastic purgative resin, and a number of them have been used in medicine. Power and Rogerson have shown that *Ipomoea purpurea* contains a drastic purgative resin. They also reported the presence of small quantities of a similar resin in the tuberous root of *Ipomoea horsfallia*. The seeds of *Ipomoea triloba* have long been used as a cathartic under the name of "Kengashi" in Japan. *Ipomoea turpethum* was at one time recognized by the French Codex under the name of "Turbith Vegetal," and is still official of the B. P. as "Turpeth," the dried root and stem being used. Kaladana (Pharbitis Seeds), the dried seeds of *Ipomoea hederaceae* is at present in the B. P. and is also a resinous cathartic drug. The tuberous roots of *Ipomoea pandurata* and *Ipomoea simulans* have long been used as adulterants for Jalap, and both contain purgative resins similar to that of Jalap. However, by far the most important of the *Ipomoeas* is *I. orizabensis*, official both in this country and in England.

Because of the growing scarcity of Scammony Root, the B. P. in 1914 permitted the use of *Ipomoea orizabensis* as a source of Scammony Resin, and the U. S. P. X omitted Scammony altogether, substituting for it the Mexican Scammony or *Ipomoea*. This drug had been used as an adulterant for Jalap for many years, the entire fusiform roots being used, and

as a substitute for Levant Scammony, flattened segments being employed.

The word *Ipomoea* is derived from the Greek, "ip, ipos," a kind of worm, and "omoios," like, referring to the climbing habit of the plant. The species name *orizabensis* is named after the city of Orizaba in the State of Vera Cruz, Mexico.

Ipomoea orizabensis is a climbing vine indigenous to Central Mexico. It produces a large fusiform more or less branching root attaining a length of 5 dm., yellow on its outer surface, and milky white within. The roots are gathered largely in the vicinity of Orizaba in the Mexican Andes, cut into transverse disks, and rapidly dried in the sun. Enormous quantities of it are imported at a fairly cheap price, and this fact alone brought about its use as a substitute for the more expensive Levant Scammony.

Ipomoea root became official in the U. S. P. X not because of any therapeutic superiority to Levant Scammony Root, but as the nearest available substitute for a valuable drug which had not been commercially obtainable for a number of years. Both the crude drug and the resin of Scammony were freely adulterated with those of Mexican Scammony and apparently nothing could be done to prevent it. Gradually the information became current that the two resins were practically identical in composition and properties, and finally the Mexican resin was officially substituted for the original.

Ipomoea, according to the U. S. P. X, should assay 15% resin, whereas Scammony in the U. S. P. IX assayed only 8% resin. The entire dispute over the wisdom of the change from Scammony to *Ipomoea* rests on the question whether or not orizabin (jalapin from *ipomoea*) is therapeutically equivalent to scammonin. Chemically, orizabin, jalapin, convulvin, pharbitisin, and scammonin are all the same. I was unable to find any real experimental or chemical data as to the comparative therapeutic value of the resins, but Sollmann, Holmes, Deane, Rustz, Ballard, Bliss, Hare, Caspari, Evers, Culbreth, Fuller, Tschirch, Wilcox, Wood, Maisch and a number of others give the two substances (orizabin and scammonin) an equivalent status as resinous cathartics. The last two United States Dispensatories and the British Codex, however, do not quite agree with this opinion, even though the B. P. recognizes *Ipomoea* as a source of Scammony Resin. If the two resins are therapeutically the same, as they seem to be,

Ipomoea is by far the most economical of the two since it contains approximately twice as much resin as Scammony, and is very abundant whereas Scammony is practically commercially unobtainable in an unadulterated state and is much more expensive than *Ipomoea*.

The purgative power of *Ipomoea* undoubtedly lies in its resin. The U. S. P. prescribes an assay for resin, but the B. P. does not. Very few methods of assay are recorded in the literature. L. E. Warren did a great deal of work on *Ipomoea* assays and recommends a combination of the U. S. P. method and the French assay method for Jalap. Deane worked on this same problem years ago and obtained results as high as 18.5% resin in samples of the drug. Power and Rogerson in 1912 obtained approximately 15% resin, 70 to 75% being soluble in ether. Taylor, however, reported that from 96 to 99% of the resin was ether soluble. *Ipomoea* resin has a higher specific rotatory power than Scammony Resin, and lower ester and saponification values. These differences are, however, not great enough to make a clear distinction.

Sollmann states that *Ipomoea*, Jalap and Scammony are about the mildest hydrogogues among the resinous cathartics. They produce watery stools within 3 or 4 hours with little intestinal irritation, without gastric disturbances or prostration. They are used in ascites, cerebral congestion, hypertension, and as an adjuvant to anthelmintics. *Ipomoea* Resin is seldom administered alone, usually being in combination with other cathartics. It is stated that 30 to 60 gr. of *Ipomoea* root is actively purgative. It is, however, rarely employed and is official only as a source of the resin.

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INTERRENALIN, THE ADRENAL CORTICAL EXTRACT

By Irving L. Landau, '34

In the October 15th issue of the *Journal of the American Medical Association*, which carried the report of Dr. J. M. Rogoff of Cleveland, we find an article of notable importance in connection with the treatment of Addison's disease.

The report clearly outlines the method of treatment and states the results obtained in the number of cases so treated. Two groups make up the basis of the experiment. The first group is the one which received "Interrenalin," and the second group is the one where "Interrenalin" was not administered.

What is of Pharmaceutical import in the article is the preparation and extraction of the active substance "interrenalin," which is a hormone obtained from the Cortex of the adrenal glands.

Its preparation is as follows: Interrenal gland tissue is obtained by separating the cortex from the medulla of the adrenals of sheep or cattle. The cortex is macerated with one or two volumes of physiologic salt solution, to which is added a volume of glycerin equal to about a fifth of the quantity of adrenal cortex used. The mixture is then agitated for two hours and allowed to remain in a refrigerator over night and shaken thoroughly at intervals. Then ten volumes of alcohol are added to the mixture, and extraction is continued for twenty-four to forty-eight hours, with frequent shaking. The liquid is then separated by decantation or straining, and the residue again extracted with a solution containing ten per cent of alcohol and five per cent of glycerin in physiologic Solution of Sodium Chloride. Two or three volumes are employed and the extraction is continued for forty-eight hours. This last extractive portion is added to the first portion and the alcohol is removed from it by vacuum distillation at low temperature. This is next extracted two or three times with benzene or petroleum benzin, after which is added enough physiologic solution of sodium chloride to make 10 c. c. of the extract equal to 1 gm. of cortex.

For oral administration of "Interrenalin" the extraction is slightly modified by the addition of larger amounts of glycerin to the original extraction; and the aqueous solvent is reduced in quantity when alcohol is added. Not all the alcohol is removed when vacuum distillation is to be made. Finally the product is completed by adding glycerin instead of physiologic solution of sodium chloride to make the desired volume. Thus prepared the solution is stable for many weeks when kept in a dark, cool place.

It is tested for potency on completely adrenalectomized dogs before is it given to man.

The result obtained by the treatment with this substance is stated by Dr. Rogoff in his conclusion, "The comparison of cases treated with interrenalin, and those under other treatment, demonstrated decided prolongation of life, and amelioration of symptoms in the former."

ITEMS IN THE SPOTLIGHT

Honey is now being sold in tubes like tooth paste.

As far back as 1800 B. C. people in India had ideas of Dental hygiene and were accustomed to clean their teeth with twigs.

A pineapple is about 89 per cent water.

Gold and aluminium both malleable metals; when combined form an alloy that is nonmalleable.

Book-binding with rubber latex is now considered feasible.

The metal indium, discovered in 1863, got its name because of the indigo-blue lines in its spectrum.

Welding by gas torch and electric arc made it possible to enlarge a ten-story medical office building in Cleveland, without disturbing the physicians and dentists.

Weather observers find that on still, cold nights, the temperature may vary by as much as ten degrees within a few feet of distance.

Soapstone was first used in the United States by the Indians who recognized its heat-retaining qualities.

It has been reported that diabetes is five times as prevalent among Jews as among Gentiles.

Dr. Wilson G. Smillie states that colds lasting only a few days give three months' immunity.

The life of a single hair on a human head is estimated at six to ten years.

A new and important safety device for coal miners is a glass tube containing palladium chloride, which turns dark if dangerous gases are escaping.

Animals suffering from tuberculosis gain in weight and live longer when given injections of ferric chloride, reports Dr. Valy Menkin.

Alcohol taken internally has been shown to increase acidity of blood.

A new theory was presented by Dr. B. P. Balekin stating that nerves produce their effect by secreting certain hormones which act on muscles and glands, instead of direct action by the nerves.

About 90 per cent of pneumonia cases develop from common colds.

ASSEMBLY TALK

Our school had the privilege of listening to a very interesting subject when Mr. R. E. Joyce, representing the Bureau of Industrial Alcohol, United States Treasury Department, addressed the students and faculty at an Assembly on October 21st. Mr. Joyce is Supervisor of Permits, attached to the Sixth District office at Cincinnati. The Sixth District comprises the States of Ohio, Michigan, Kentucky, and Tennessee.

While the policies and functions of the Bureau were the chief topics of discussion, the speaker gave some attention to the many industrial fields in which alcohol plays an important role. An exhibit of many interesting articles, in the manufacture of which alcohol enters in some way, added zest to the talk.

Mr. Joyce was followed by Dr. H. W. Moore, attached to the Research Staff of the Bureau of Industrial Alcohol. Dr. Moore spoke on "Ginger Paralysis." Lantern slides were used to show the effects produced on both men and animals.

In the evening of the same day both speakers addressed a meeting of the Cleveland Academy of Pharmacy on the same subjects.

The Reserve Pharmacon

*A Publication Dedicated to Professional Pharmacy by the Students of the
School of Pharmacy of Western Reserve University*

Editor -----GUSTAV C. KOSTELL Associate Editor-----MAURICE L. FINBERG, '35
Faculty Adviser -----PROF. N. T. CHAMBERLIN

REPORTORIAL

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Edward W. Hemmeyer, '33 Irving L. Landau, '34
Geo. R. Motosca, '35

BUSINESS

Theodore E. Gutkowski, '34 Phylliss G. Israel, '35

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Cleveland, Ohio

WESTERN RESERVE SCHOOL OF PHARMACY

October, 1932

No. 4

EDITORIALS

The Editor has asked me to say a few words of greeting in this first issue of the PHARMACON. Nothing gives me more pleasure than to comply with the request.

This school year is an unusual one, particularly from the standpoint of the difficulties which the student has encountered and will encounter to maintain himself in college.

This is the first time I have ever found it difficult to secure positions for those who need help while in college and for some few who are our graduates. This fall I sought to meet this situation by writing to friends and acquaintances to find places in homes where students could earn room and board. This scheme was more than successful and brought more places than we had students to fill them, but these places were not wasted and were turned over to other departments.

Many druggists, who have heretofore taken students, found themselves with high schools boys and qualified helpers, employed for the summer, but who had no place to go this fall. Others found that this year they themselves must do the work that in other years they have been glad to turn over to students.

But there is another side to the picture, and it is not a dark one. Now is the time when, if one can prepare himself properly, he will be in a position to seize the opportunities which will come with the return of business. Properly trained young men and women will be in demand, and particularly so in Pharmacy.

Pharmacy has been passing through a reconstruction period of its own that has been intensified by the depression. During this period educational standards have been raised and the course of future Pharmacy has been charted. The pharmacist of tomorrow will be a man or woman prepared for a profession and the professional work will be there to be done.

We have been following the tracks of things commercial and we have learned to our sorrow that it has led us exactly nowhere. Our publications have realized this, and they today talk professional things. A few years ago many of them scoffed at all professional things. This is a matter of record for those doubting ones who care to read. Our organization meetings have followed a similar trend. Because of latter day education we are today finding relatively easy recognition in state, government and hospital organizations. The public has for

some time recognized these facts and is demanding more professional service.

To those of you who have returned to college and to those of you who have just begun your college course, let me say, you are indeed fortunate. Keep the faith and be found worthy and the opportunity will be there when you are ready for it. My heartiest greetings and best wishes to you during these temporary hard times.

Edward Spease, Dean.

A LITTLE HELP GOES A LONG WAY Maurice L. Finberg, '35

Many homeless, all hungry, thousands without adequate clothing protection against penetrating Cleveland weather, one-eighth of the population of Greater Cleveland must be cared for by relief-giving agencies this winter. These thousands of honest, industrious citizens, through no fault of their own, are without work and in want. It is our very urgent duty to remedy this condition in the only way possible, and that is to help alleviate the suffering by giving to our Community Fund.

From November 14 to 22 the Cleveland Community Fund will hold its fourteenth annual campaign. To obtain its desired goal of \$4,250,000 it will be necessary that each and everyone of us do our utmost. There had been times in the past when it was necessary to strive hard and give freely, but it is many times truer at this time. Never before has there been such a wide difference between the amount of money needed and the amount available. Many who gave last year are this year on the list of receivers.

The local number of relief families has increased by leaps and bounds. In January, 1931, it was under 9,000; in January, 1932, it was over 21,000; the forecast for January, 1933, is over 35,000, nearly four times that of 1931.

Last year 470,000 givers—men, women, children and business firms—ever-subscribed the Community Fund goal of \$5,650,000. Since then unemployment has taken its toll of this number. Many generous givers have died. Others have had severe money losses. Those of us that are going to college have a good home, have a job, or have savings are fortunate and thankful in these days. Our

giving to the Community Fund should be unstinted. Success in the Fund's difficult undertaking depends on this assurance.

The goal of this year's campaign can be reached only if every one able to give gives all he can. This year's needs are greater than ever before. There will probably be less contributors this year, so every one is urged to give more, if possible, than he ever gave before.

STUDENT BRANCH OF THE A.P.H.A. ELECTS NEW OFFICERS

The local student branch of the American Pharmaceutical Association has elected the following officers for 1932-1933: President, Karl W. Schweickardt; Vice President, Theodore E. Gutkowski; Sec'y and Treas., Ray R. Stemple.

Plans have been formulated for bringing the Student Branch up to the neighborhood of a score of members and arranging for future joint meetings with the Northern Ohio Branch of the American Pharmaceutical Association (Cleveland Academy of Pharmacy).

Miss Nancy H. Wright Wins Scholarship

The 1932-1933 pharmacy scholarship was awarded to Miss Nancy H. Wright of Wiloughby, Ohio. Miss Wright won out in a competitive examination with four other contestants. The award has a value of \$300 and will be renewed for three successive years, provided the winner does outstanding work in class and laboratory assignments.

Pharmacy Student Council and Class Officers Elected for 1932-1933

President, Gustav C. Kostell (President of Senior Class); Vice-President, Edward W. Hemmeter (Senior Class S. C. Representative); Treasurer, William K. Kutler (President of Junior Class); Secretary, Frank J. Mader (Senior Class S. C. Representative).

Other Council Members Elected

Ladimer Yunger (Senior Class Representative), Philip H. Dunner (Junior Class Representative), Karl W. Schweickardt (Junior Class Representative), George R. Motoasca (Sophomore Class President), Leo C. Krejci (Sophomore Class Representative), Edward G. Wasiniak (Freshman Class President).

"CLINICAL LABORATORY MANUAL FOR NURSES AND TECHNICIANS"

The above is the title of a very complete manual published by C. V. Mosby and Company, St. Louis, Missouri, and edited by Sister Mary Alma, Chief Technician of St. Thomas' Hospital, Akron, Ohio.

Sister Alma graduated with the Class of 1921.

We wish, at this time, to congratulate Sister Alma on her organized compilation of laboratory detail.

The manual presents in a very compact form a clear and concise description of the various laboratory procedures as carried out in the modern hospital of today. An outstanding feature of this book is that it shows the need for organized activity between the nurse, the attending staff, the visiting staff, and the party responsible for special and routine examination of specimens.

Anyone employed in this or a similar capacity in a hospital has many times wished that he might turn to a ready reference wherein he might find a suggested solution or scheme for the handling of routine laboratory tests that would be satisfactory to the above-mentioned parties. Sister Alma's work offers a basis upon which any hospital can work out a standard routine for the collection, identification, analysis and report on all specimens, regular and special, taken in a hospital.

The book will certainly be a great aid to any hospital administrator, nursing supervisor, or laboratory technician who is responsible for organizing or reorganizing a unified laboratory system. We do not doubt but that the careful consideration of the material contained in this publication by every graduate at the same time will be enlightening and at the same time promote an understanding that will in turn produce greater cooperation between the collector and the analyst.

The least that can be said of this publication is that it is unique and comprehensively fulfils the purpose for which it was written.

Reviewed by R. M. Porter, Class of 1929, Pharmacist at University Hospitals, Cleveland.

Fraternities

ALPHA ZETA OMEGA NEWS

"Green Gables" is the new home of A. Z. O. "And why not?" asks Directorum Dunner. "We can always go downstairs and get a steak with potatoes. How he loves them! Notice his circumference lately? Dunner is known to have slept on a bag of potatoes all night. "I had to get up potato clock," he explains.

Notice the worried looks on the faces of Meyer Kantor, Maurice Finberg, Samuel Cantor and Kidy (the Tiger) Leopold. They're pledged to A. Z. O., and how well they know it! Please don't offer them a chair.

A. Z. O. had a K. O. of a good time at their Summer Outing at beautiful Fell Lake. After a baseball game in which Joe Eisenberg insisted upon hitting home runs, the old hunger urge was appeased. Three Fraters whose girls were missing finally found them. "We were taking a tramp through the woods," explained the girls. Cut it out now, these girls are nice! Then the egg-throwing contest. Reward for the capture of the villain who was using a golf ball. We think it was an Eisenberg. A. Z. O. has been holding out on the Reserve swimming team from what we saw at Fell Lake. If you think this wasn't a family affair ask Mr. and Mrs. Carl Kovacs and family, Mr. and Mrs. Lew Gressel and family, Mr. and Mrs. Jack Baskind, Mr. and Mrs. Milfred Harris, and (soon to be, Winchel) Mr. and Mrs. Philip Krenitz. They were all there. Little Kovacs, Junior, is getting Fraternity-conscious like his gweat bwig papah. He thinks it was A. Zwell Outing. What was Frater Miller doing all this time? Taking movies of everything and everybody, and they'll be shown at the A. Z. O. Halloween Dance at Astorhouse Villa, Oct. 27.

"Let's make this Halloween affair gresome and not wear masks," says Hy Gerson. Hy is clever. He says he waits on 700 customers daily, but only a few show up. "Pharmacy will never be a financial success," says Hy, "due to the fact that its

business must be done on a small scale." (Torsion.)

"O, Yes!" says Joe Dworkin and Jack Franklin. Both are sporting new Plymouths. Joe took his to the Michigan-Northwestern game, Oct. 8th, making the trip to Ann Arbor in 4½ hours. Don't believe it? Ask Julius Miller. He went, too, and took movies of the game. What-a-game!

Ask Abe Harris and Ernie Gross how they liked cottage life this summer. "Yes, we did," answer Jack Baskind, Al Baskind, Dave Baskind, Joe Dworkin and Julius Miller. Must they all migrate every summer?

Here are some more questions and answers.

Q. Who's expecting a Blessed Event?

A. Mr. and Mrs. Max Weinberg.

Q. Who's got the smartest kid in the world?

A. Don't know, but ask Jack Franklin.

Q. Who bought the Honecker Drug Store at West 93rd Street and Lorain Avenue?

A. Supreme Directorum. Milfred Harris.

Q. What did Milfred write in his letter to Hy Gerson on January 1st?

A. "Dear Hy; am spending my honeymoon in Havana; it is wonderful here."

Q. What did Hy Gerson answer?

A. "Dear Milfred Harris; it is wonderful any place."

PHI DELTA CHI NEWS

Phi Delta Chi Fraternity began this year under unusual conditions. The depression seems to have reached our door. We started the current semester with but one active, but through the able moral support of our Alumni the fraternity is slowly coming into its own. So far we have four pledges, William Bretschneider, from Youngstown, Earl Russell, from Canton, Vladimir Yensen, from Lyndhurst, and Otto Haneberg, from this city. With the aid of these boys, prospects for the future look much brighter.

At present we are serving three meals a day at the Fraternity House, and they are certainly excellent. Ask anyone who has eaten there. Among those who are regular noon visitors at the house are Brothers Wargell, Stimson and Kock. Lunch is

served at 12:15 every day, so if any of you boys are in the vicinity at that time, stop in and enjoy a real meal. Incidentally depression prices are prevalent to make your budget balance. At present we have six men staying at the house, among whom are Brothers Kessler, Armstrong, Gerber and pledge Russell.

Professor Davy has again consented to act as advisor to the fraternity. Brother Davy has served very diligently in this capacity for a good many years. Brother Davy, the entire Chapter wishes to thank you for your support and advice which you so generously extend this Chapter. We all feel that we have benefited greatly from your ideas and showing of loyalty to the organization.

We wish to offer our condolences to Brother Kumpf and family. Brother Kumpf's dad passed away at his home in Canton on Thursday, October 2nd. We who had the pleasure of knowing Mr. Kumpf can fully appreciate what the loss of such a man means, not only to his family, but also his community and city.

Alumni News

Congratulations to Brother Kumpf who was married on September 6th. Brother Patronskey also was married on July 22nd.

Brother Lantenschlager stopped at the house last week. Before he left we discovered that he had just taken unto himself a wife whom we all knew as Miss Betty MacGregor of Kenmore. Lots of luck, Kenny.

Now we are wondering about Allen Armstrong. Allen is still at Streich Phcy during the day and dividing his evenings between Cleveland College and the Commodore Hotel.

Brother Bennett is running the drug store in Salem; we expect him back next semester.

Brother Kessler spent his vacation at the home of Brother Baldinger near the campus of the famous Notre Dame University, where Brother Baldinger is teaching.

Brother Stafford is staying at the house. He is employed by the Grasselli Chemical Co.

Ed and Mrs. Miller have made Cleveland their home. Ed is working for Standard Drug at Page and Euclid.

George H. Bruehler completed his Pharmacy course and has returned to his home in Port Huron, Michigan.

Brother Schroeder is in line for congratulation. He now divides his time between his loving wife and City Hospital Dispensary. May all your troubles be little ones, Brother and Mrs. Schroeder.

On the night of October 25th the alumni held a meeting at the house. At this time the wives of the alumni formed a Women's Auxiliary and are already planning a Dessert Bridge on Friday afternoon, on November 4th. We wish to extend a vote of thanks to the women who showed this unusual amount of interest in our Fraternity. Those who are responsible for this organization are: Mrs. Davy, Mrs. Wargell, Mrs. Koch, Mrs. Patronsky, and Mrs. E. Miller.

Brother Kumpf is still employed at City Hospital, and is living on the west side of town.

KAPPA PSI NEWS

Seven Kappa Psi Brothers answered to the roll call when the first meeting of Beta Beta Chapter was called to order by Regent Roger K. Lager. After a summer spent in various ways, all present expressed a desire to make this a banner year for Kappa Psi.

The first event on our social calendar was a Pledge Smoker, which was held at the chapter house on September 19. This smoker was well attended by faculty members, alumni, pledges and prospective pledges. We are proud to announce that the following students are now pledged to Kappa Psi: Roger W. Marquand, Ted Gutkowski, George Motasca, Myron Chichota, Gene W. Johnston, Charles W. Nevel, Edward G. Wasiniak, Walter Knurek, and Frank Krizek. We trust that these men will find their pledge period a pleasant one, and later become good Kappa Psi brothers.

Another social event was enjoyed by all on October 14, when a very enthusiastic crowd of young people gathered at our chapter house for "The Annual Pledge Dance and House Party." Mr. and Mrs. Neil T. Chamberlin and Mr. and Mrs. Leroy D. Edwards were chaperones. The house was decorated in a typical Hallowe'en fashion. Cider and dough-nuts were served during the intermissions. This was the first dance held at our new house, 12800 Forest-

hill Road, and we were pleased to find that the facilities were satisfactory—meaning: More dances. When? Soon. Watch the "Beta-Gram" for social announcements.

Some of our "Active Alumni" are working with the active chapter in an attempt to reorganize "The Cleveland Graduate Chapter of Kappa Psi." The next issue of the "Beta-Gram" will be devoted to our endeavor and accomplishments along this line. This issue of the "Beta-Gram" should be in your hands in the very near future. If you do not receive this issue, it is because your present address is not on our files. If you do not receive the "Beta-Gram" send us a postal, with your address on it, or phone the chapter house. Please note: The telephone number has been changed to GARfield 8815.

Four men are living at the house at the present time. They are: Brothers Lager, Reese, Stemple, and Pledge Marquand. Brother George Sherlock expects to move into the house in the very near future. This year we are serving three meals daily. Why not come out to your frat house and enjoy a delightful meal? At the same time you will renew old friendships and make new ones. Bring a friend with you, if you care to; you will always be welcome.

ALUMNI NEWS

Brothers Hartman, Palachek, Driggs, Wright, Feilds, Van Keuren, Celke, Fitch, Valway, Porter, Lauria, and Fox were recent visitors at the house.

Brothers Andrews, Neely and Meresicky are working at Sherwood's Drug Company.

Brother R. M. Gable is working at the Standard Drug Co. at Noble and Mayfield Roads.

Brother Fitch is working at the Nottingham Drug Company.

Brother Cullinen is working for McKesons in Akron.

EXPRESSED OIL

Frosh—"What's the matter with you?"

Junior—"Nothing, why?"

Frosh—"You gave me a nutty look just now."

Junior—"Well, you've got a nutty look all right, but I didn't know I gave it to you."

Patient—"And now, doc, will this anesthetic make me sick?"

Doc—"No, not at all."

Patient—"How long will it be before I know anything?"

Doc—"You're expecting too much of the anesthetic."

R

Speed cop, who has stopped speeding feminine motorist,—"When I saw you come around the corner, I said to myself, 45 at least."

Feminine Motorist—"Don't try to be smart."

R

Dumb—"Where'd you get that bump on your head?"

Cluck—"Well, you see, I was out sailing and somebody yelled, 'Watch out for the boom,' and I held my ears instead of ducking."

R

He—"Didn't I see you wearing a bathing suit at the Fancy Dress Ball last night?"

She—"Gee, but you must have left early."

R

Lou—"Do you like to dance in this dark corner?"

Louise—"No, let's stop dancing."

R

Kostell—"Did you test the oil sample?"

Besking—"Yes, it tested awful to me."

R

Art Stude—"You are the first of my models I've ever kissed."

She—"How many have you had?"

A. S.—"Four, an apple, a banana, a bouquet and you."

R

The laziest collegiate is one who pretends he is drunk so his fraternity brothers will put him to bed.

R

Sabo (To waitress)—"Pardon me, but was that sandwich I just ate fresh?"

Waitress—"Our sandwiches come fresh every day, wrapped in airtight cellophane."

Sabo—"I wish I'd known that."

R

Yah, this is the Imperial Army Headquarters of Dizzia. General Wilhelm von Schnozzle speaking—and what does Papa's itsy witsy baby want him to bring her tonight?

R

Little Algy (to old lady he has never seen before)—"So you're my Grandmother, are you?"

O. L.—"Yes, on your Father's side."

L. A.—"Well, you're on the wrong side; I'll tell you that right now."—*Tenn. Mugwump.*

Leinert—"Say, Landau, why are you washing your spoon in your finger bowl?"

Landau—"Do you think I want to get egg all over my pocket?"

R

Regent—"Another bite like that and you'll leave the table."

Pledge—"Another bite like that and I'll be finished."

R

Yunger says he can speak any animal language, but he finds lion easy.

R

Ritzy Dame—"Yaas, my husband plays the organ."

Newlywed—"My husband will have to get one, too, if things don't get better soon."

R

Statistics prove that fifty per cent of the married people are women.

R

Ein—"Where is Nell today?"

Zwei—"She's up in the mountings picking violets."

Ein—"There's B'ars in them mountings."

Zwei—"Yeah."

Ein—"Ain't little Nell afraid of the b'ars?"

Zwei—"Naw, she's got her bicycle with her and she can handle bars."—*Dirge.*

R

"But I tell you, Ray, I didn't swipe your liquor."

"Well, some contemptible, sneaking low-life swiped it, and if I hadn't knowed where Max hid his, I'd a been outa luck for my date last night."—*Texas Ranger.*

R

Youngster (on cruise)—"You know, I like navigation when it's not over my head."

Old Salt—"Yeh, that's the way I feel about seagulls."

R

Indignant Farmer—"Say, look here, you ain't getting as much milk from the cows as you used to."

Hired Help—"Nope, sorter lost my pull."

R

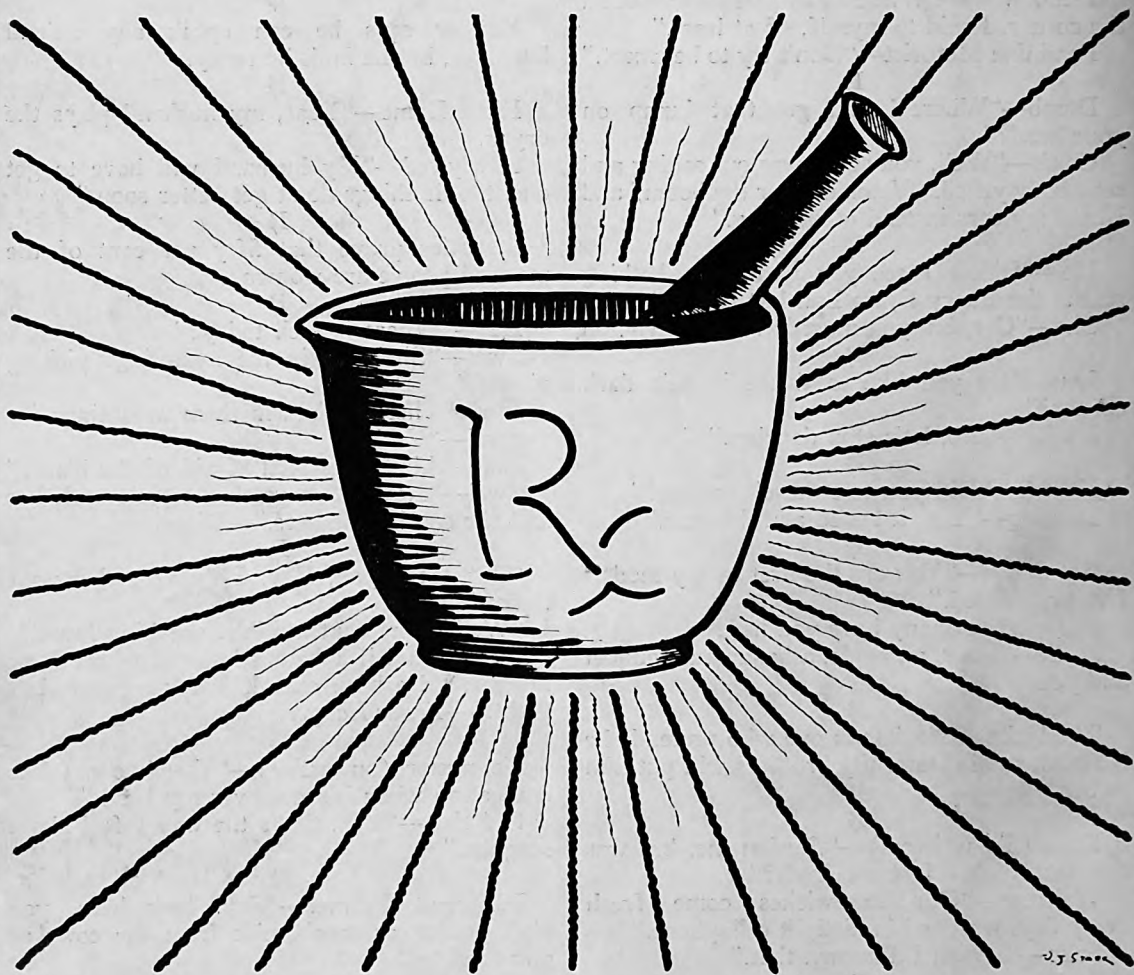
Visitor—"Tell me, is this village lighted by electricity?"

Inhabitant—"Only when there's a thunder-storm."

R

Thomas—"One of my ancestors came over on the Mayflower."

Frethhold—"Oh, yeah; how long's he going to stay?"



U. J. S. 1900

